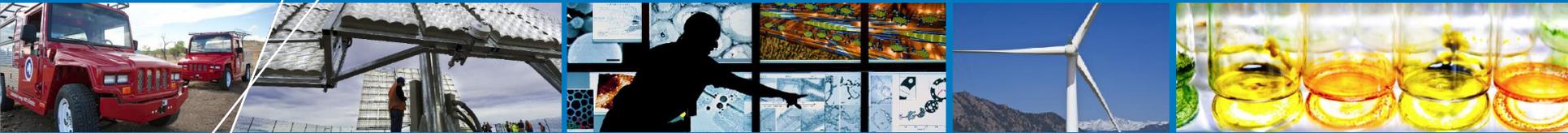


Fleet DNA Project Data Summary Report



Kevin Walkowicz

Adam Duran

Evan Burton

8/1/2014

PR 5400 57992

The Fleet DNA Project:

The Fleet DNA Project aims to accelerate the development of advanced vehicle technologies while supporting the strategic deployment of market-ready technologies that reduce costs, fuel consumption, and emissions.

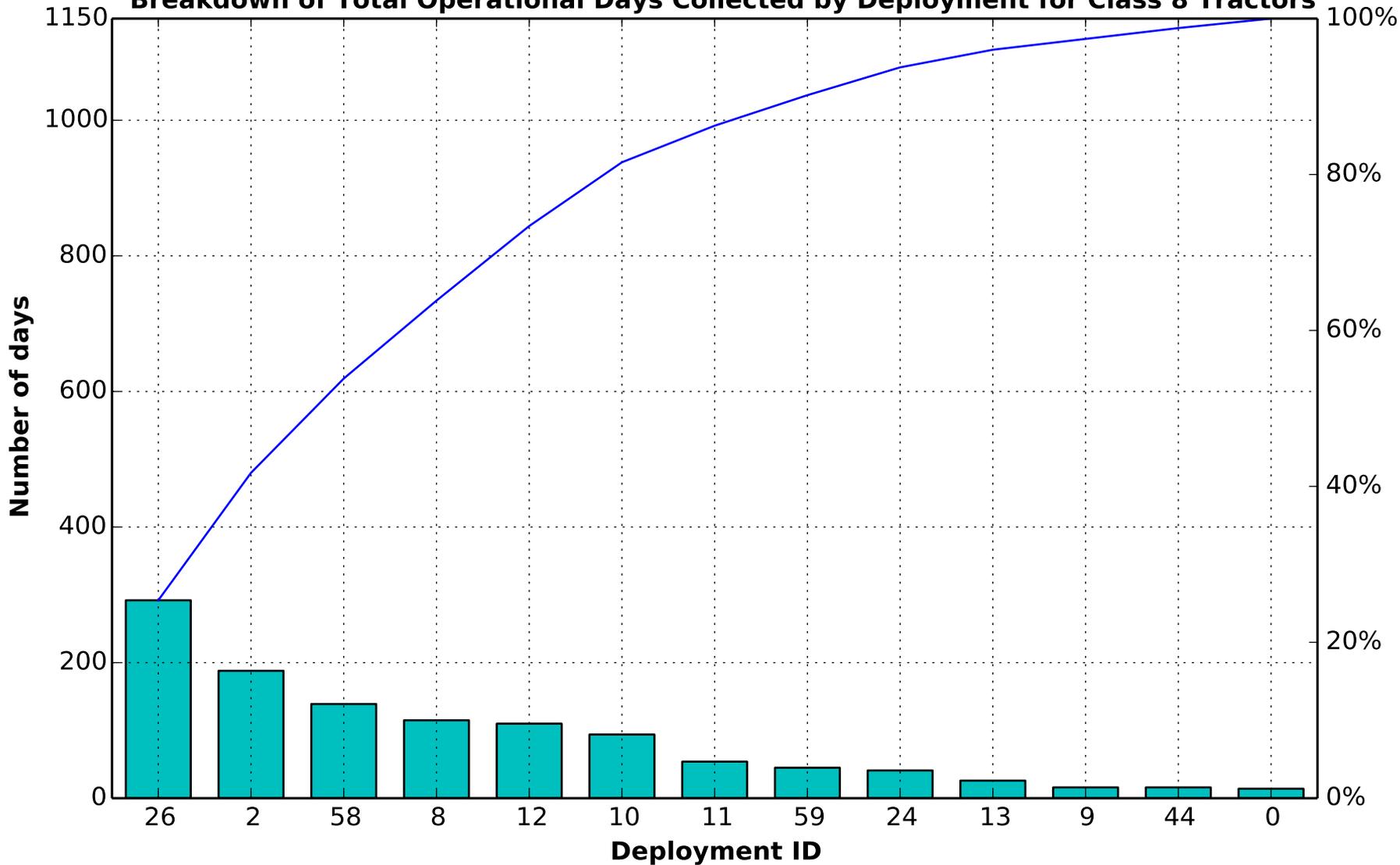
Designed by the U.S. Department of Energy's National Renewable Energy Laboratory in partnership with Oak Ridge National Laboratory, the data summaries contained within this report are designed to illustrate the broad operation range of many of today's vehicle vocations and to provide insight into key observable statistical trends.

Within This Report:

Contained within this report are graphical data summaries based on real-world “genetics” of medium- and heavy-duty commercial fleet vehicles operating within a chosen vocation.

These graphical data summaries have been selected to highlight key statistical trends observed in past U.S. DOE fleet studies, and to provide insight into potential areas of interest for the continued development of technology to reduce costs, fuel consumption, and emissions.

Breakdown of Total Operational Days Collected by Deployment for Class 8 Tractors

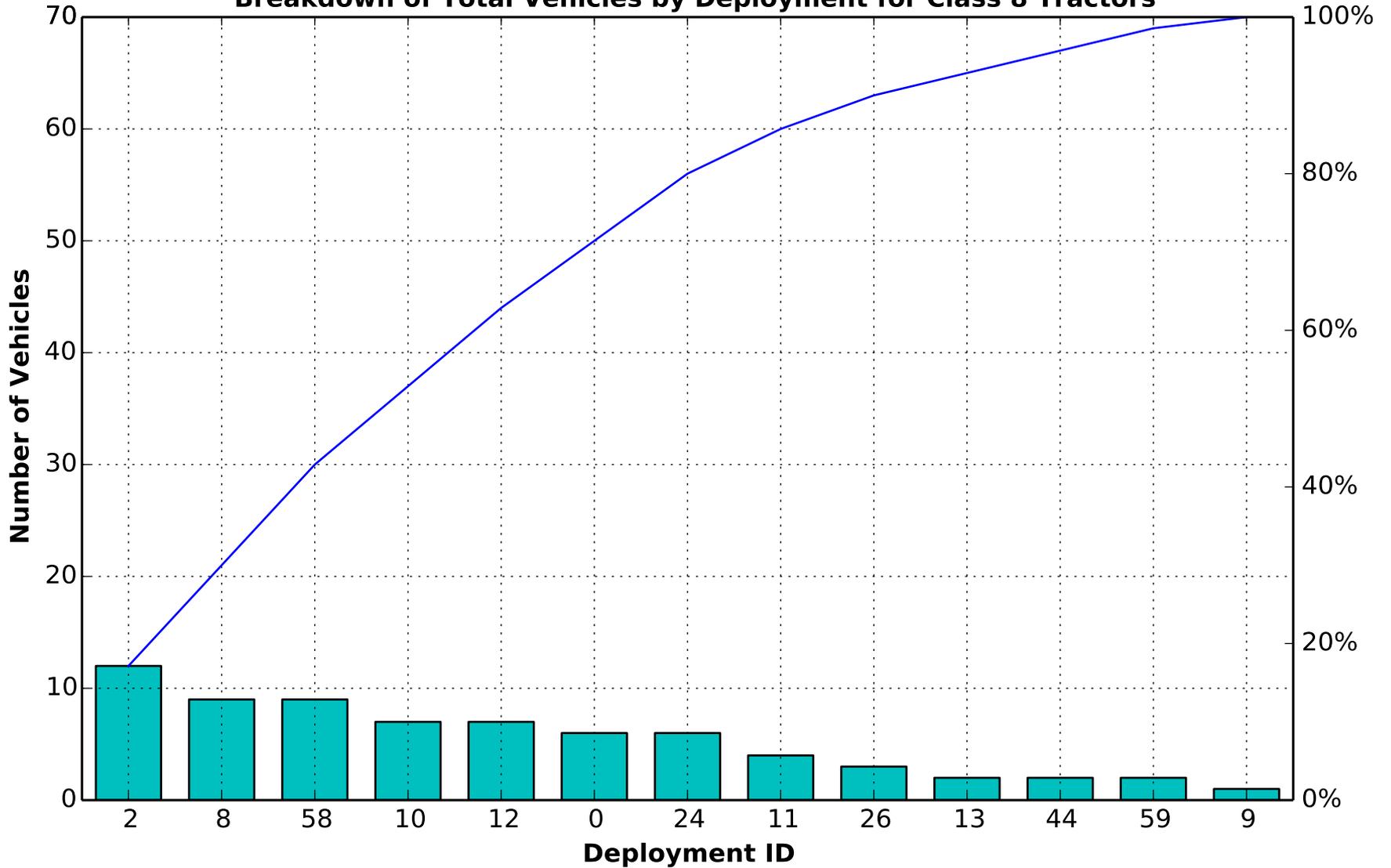


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Breakdown of Total Vehicles by Deployment for Class 8 Tractors

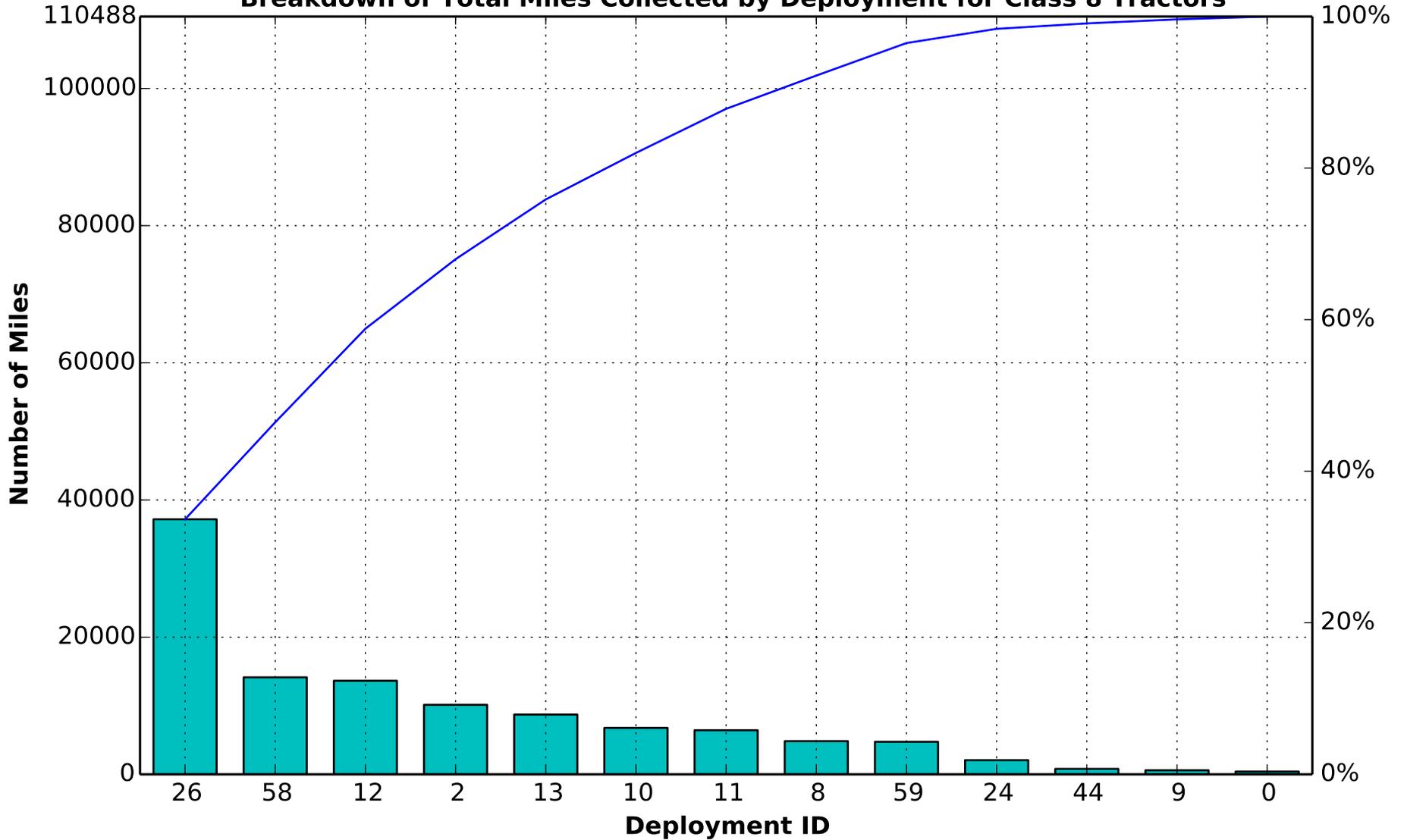


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Breakdown of Total Miles Collected by Deployment for Class 8 Tractors

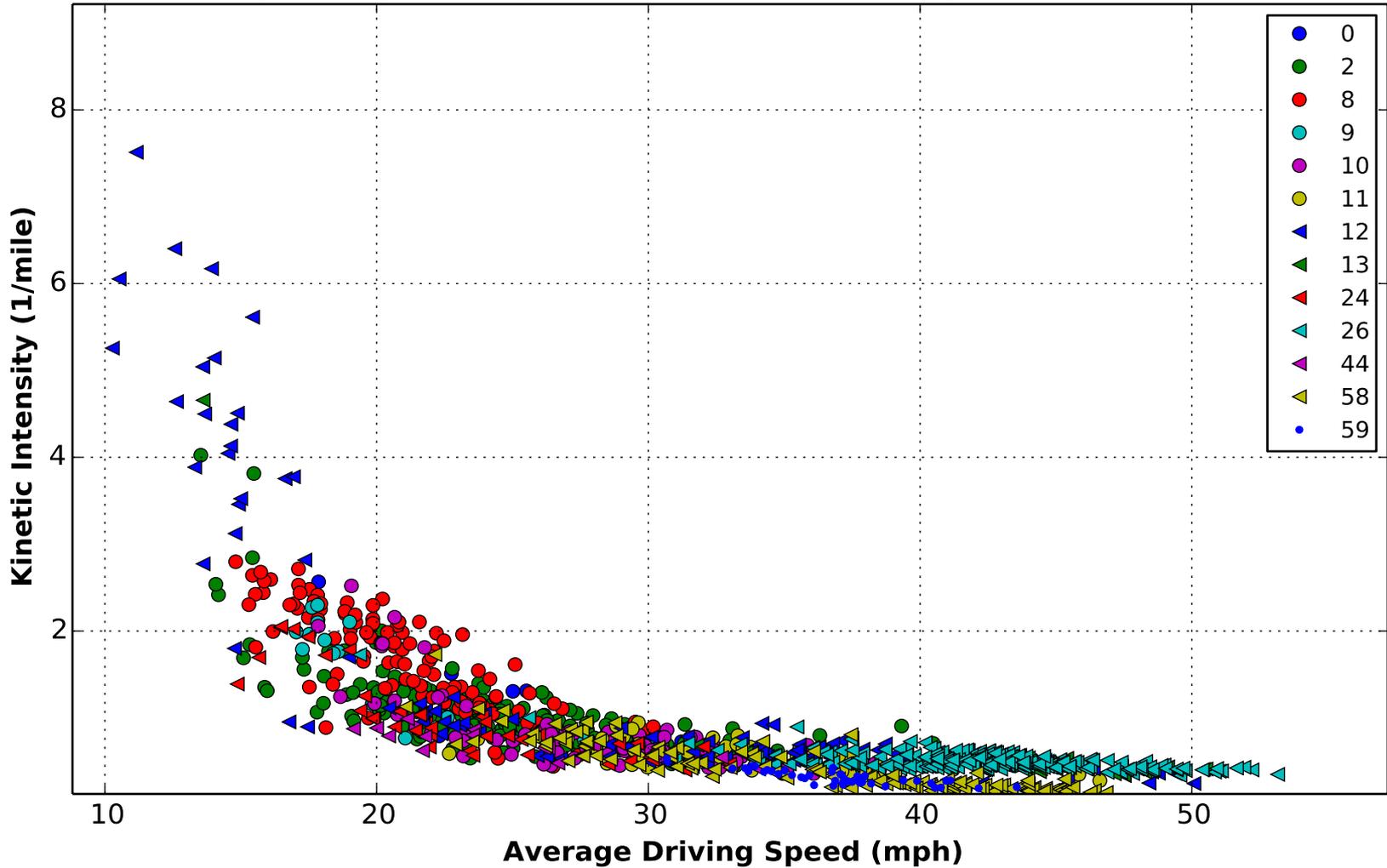


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

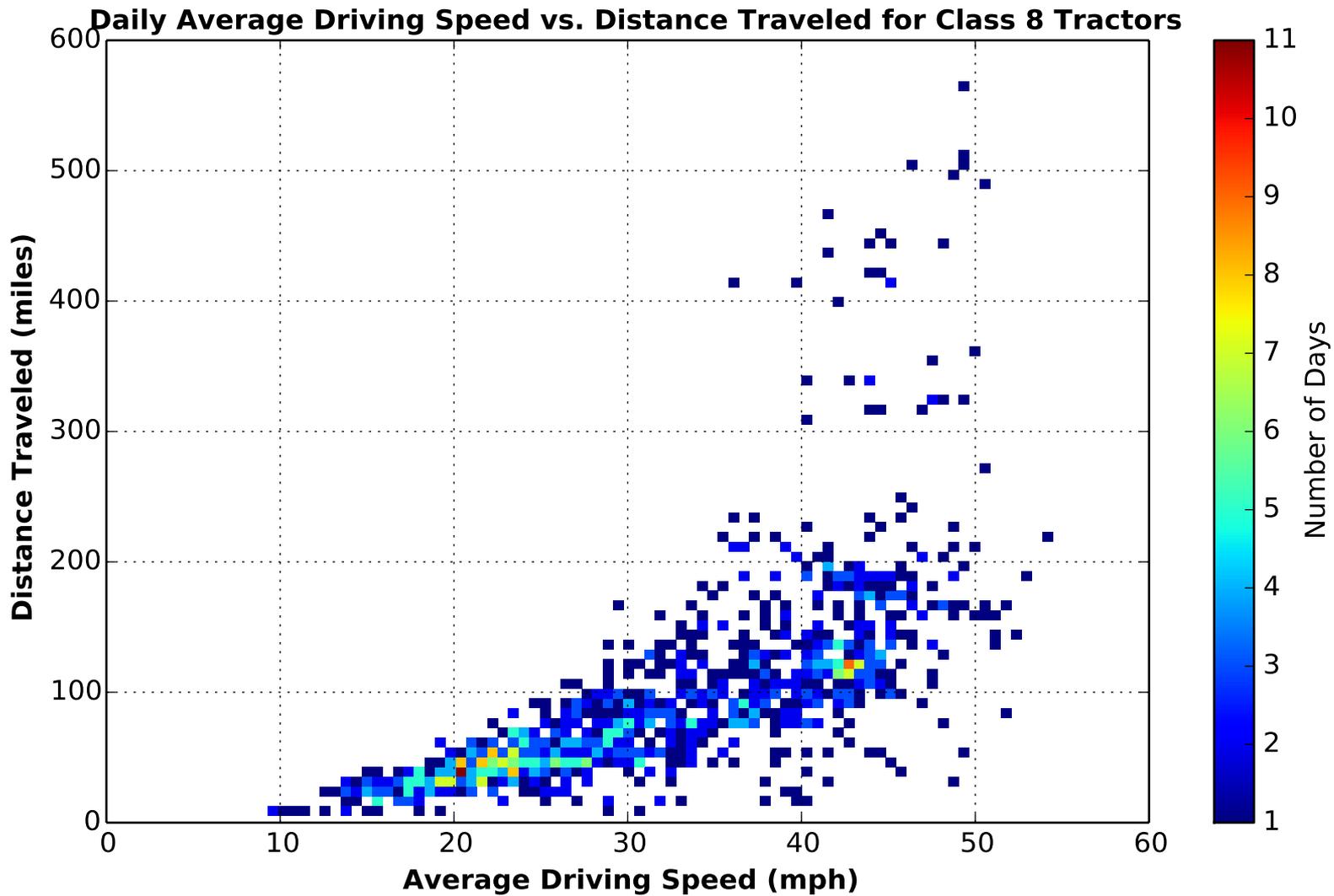
Daily Average Driving Speed vs. Kinetic Intensity for Class 8 Tractors



of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1146

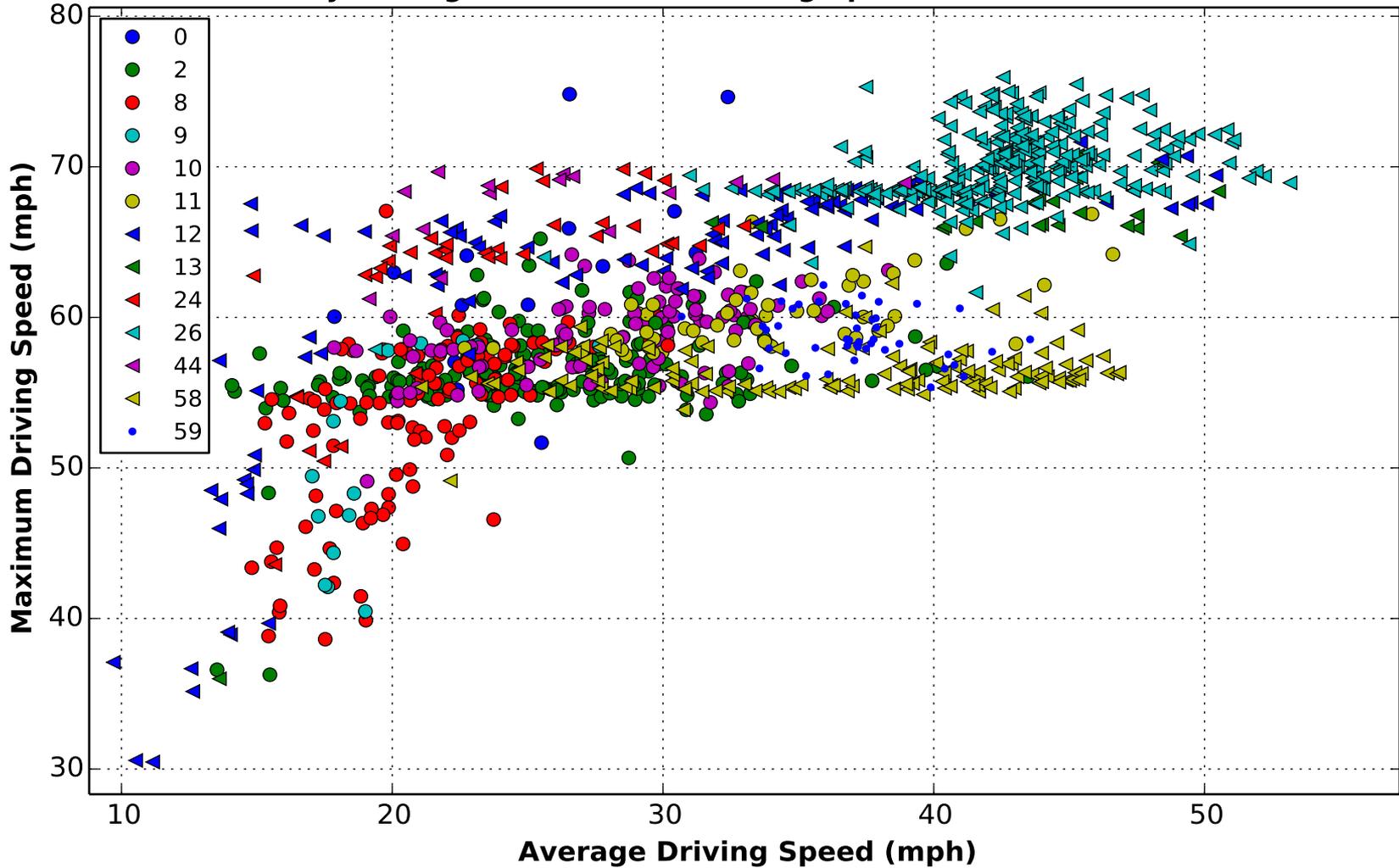


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Average vs. Maximum Driving Speed for Class 8 Tractors

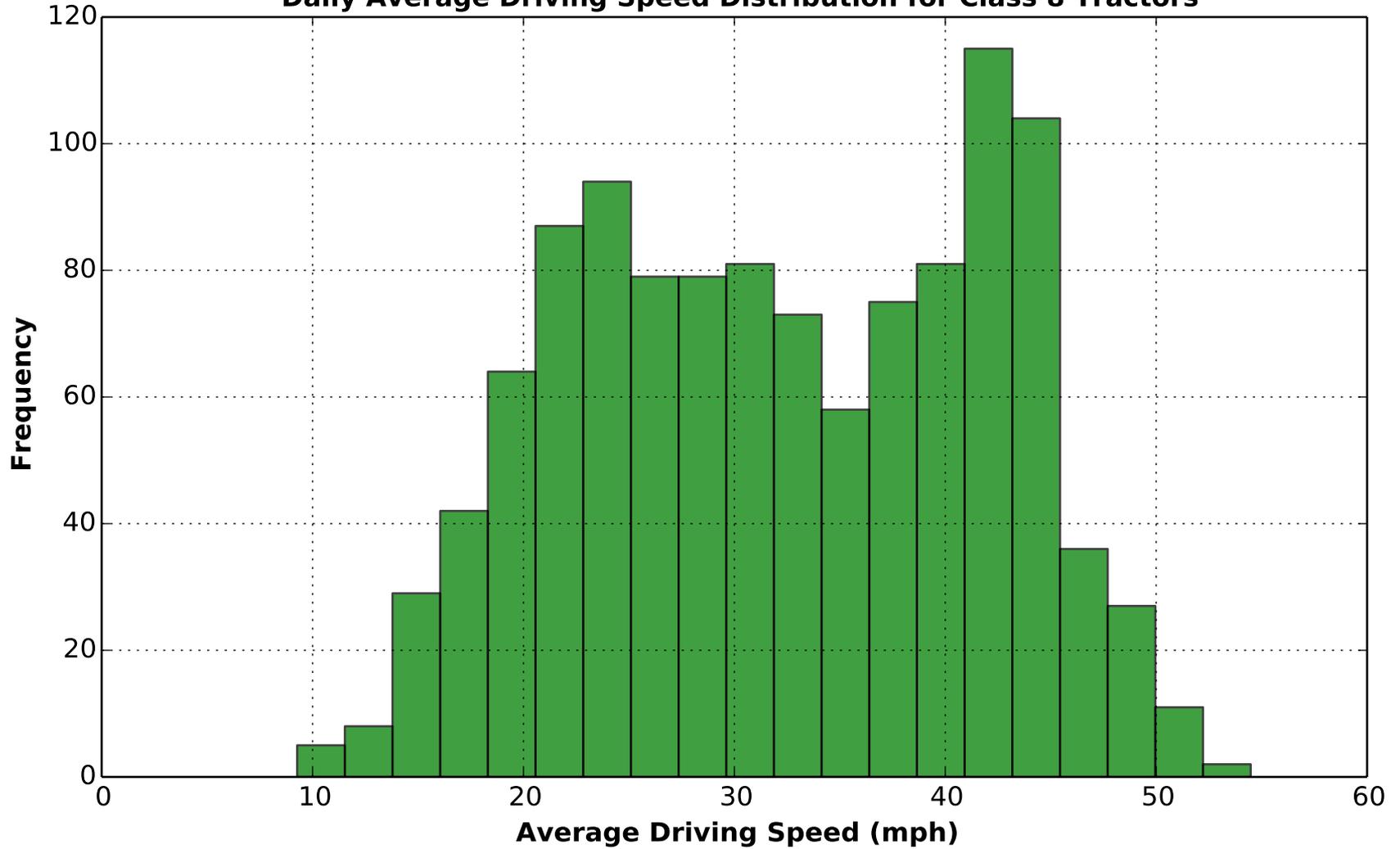


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1146

Daily Average Driving Speed Distribution for Class 8 Tractors

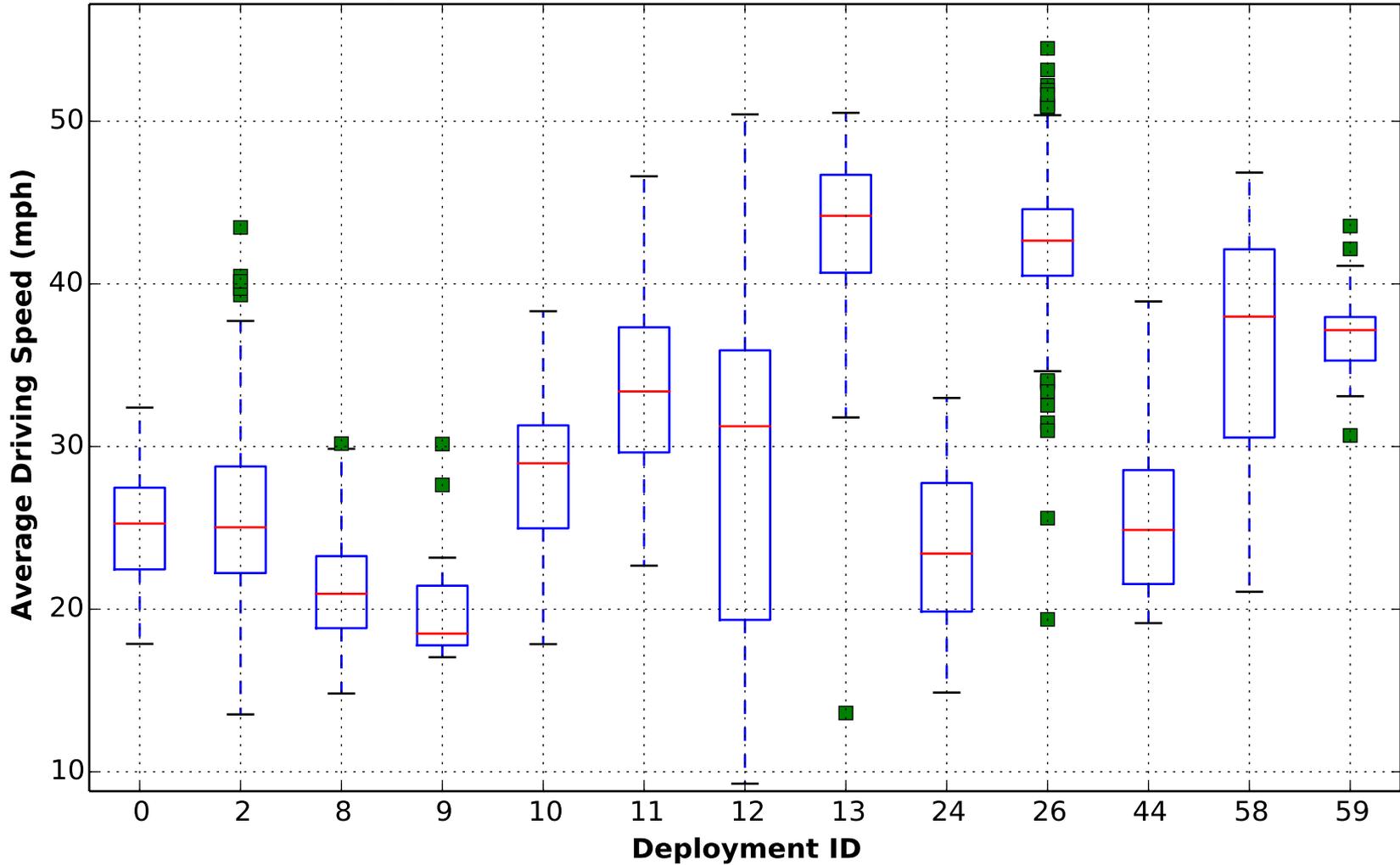


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: : 1150

Average Driving Speed by Deployment for Class 8 Tractors

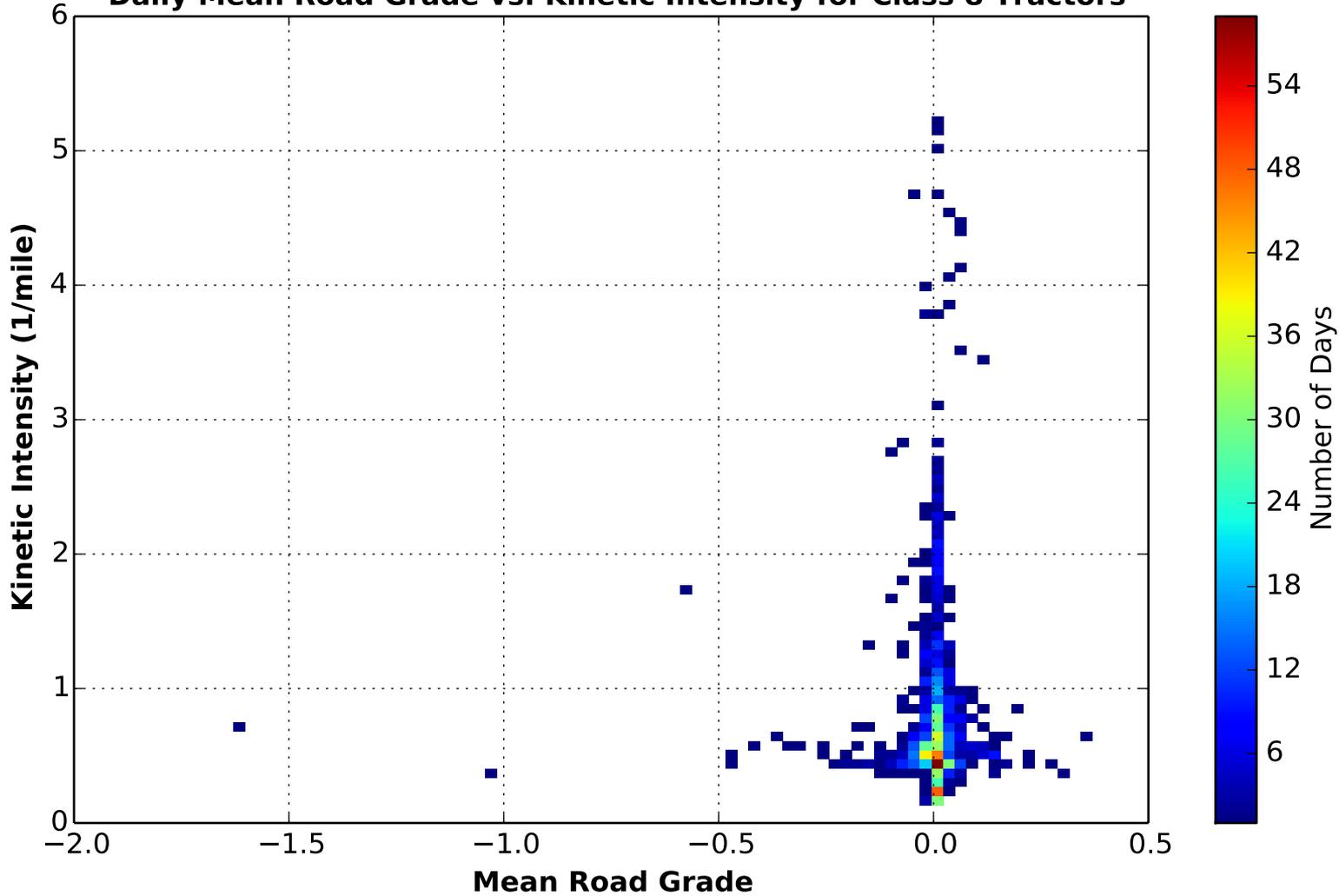


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: : 1150

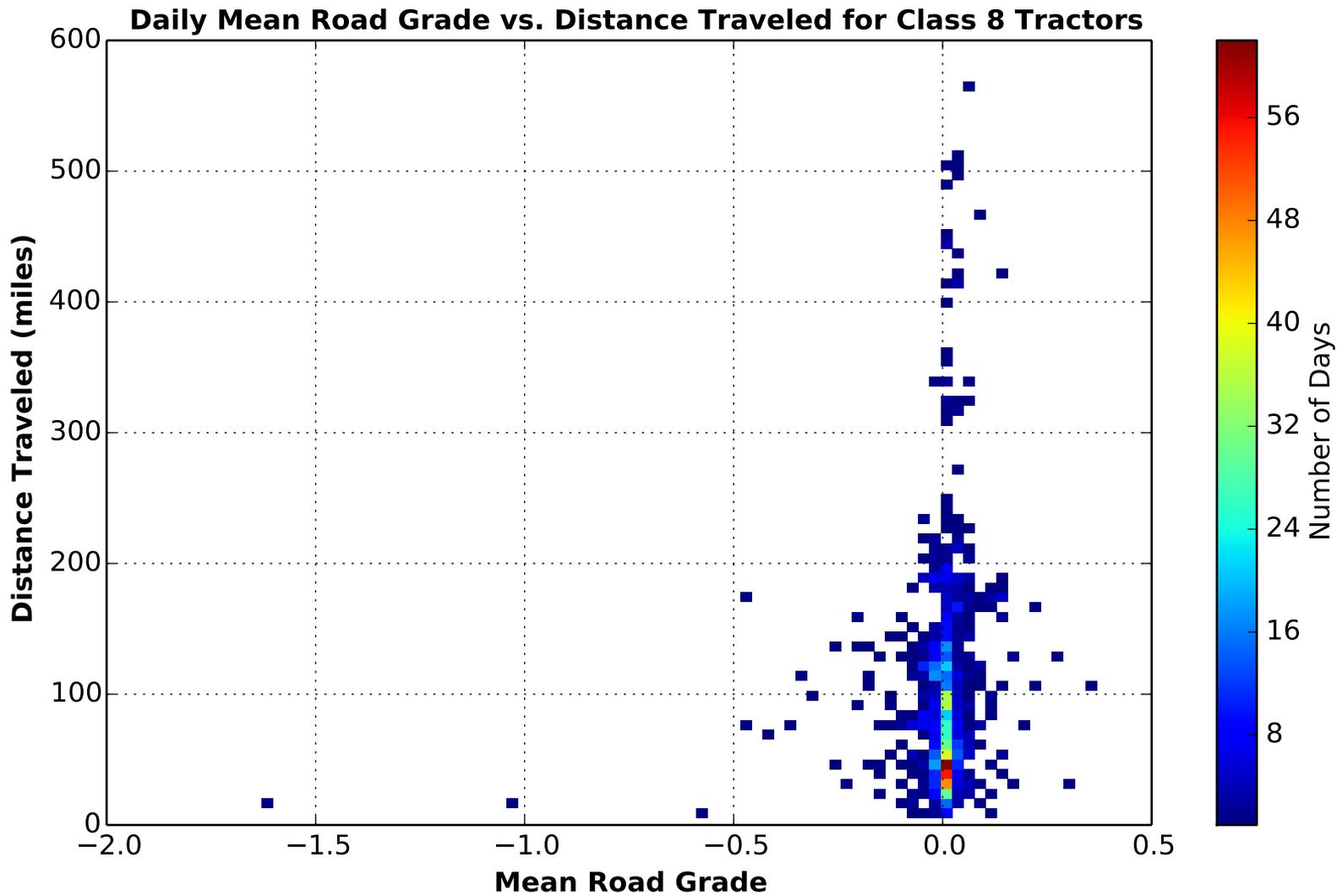
Daily Mean Road Grade vs. Kinetic Intensity for Class 8 Tractors



of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1143

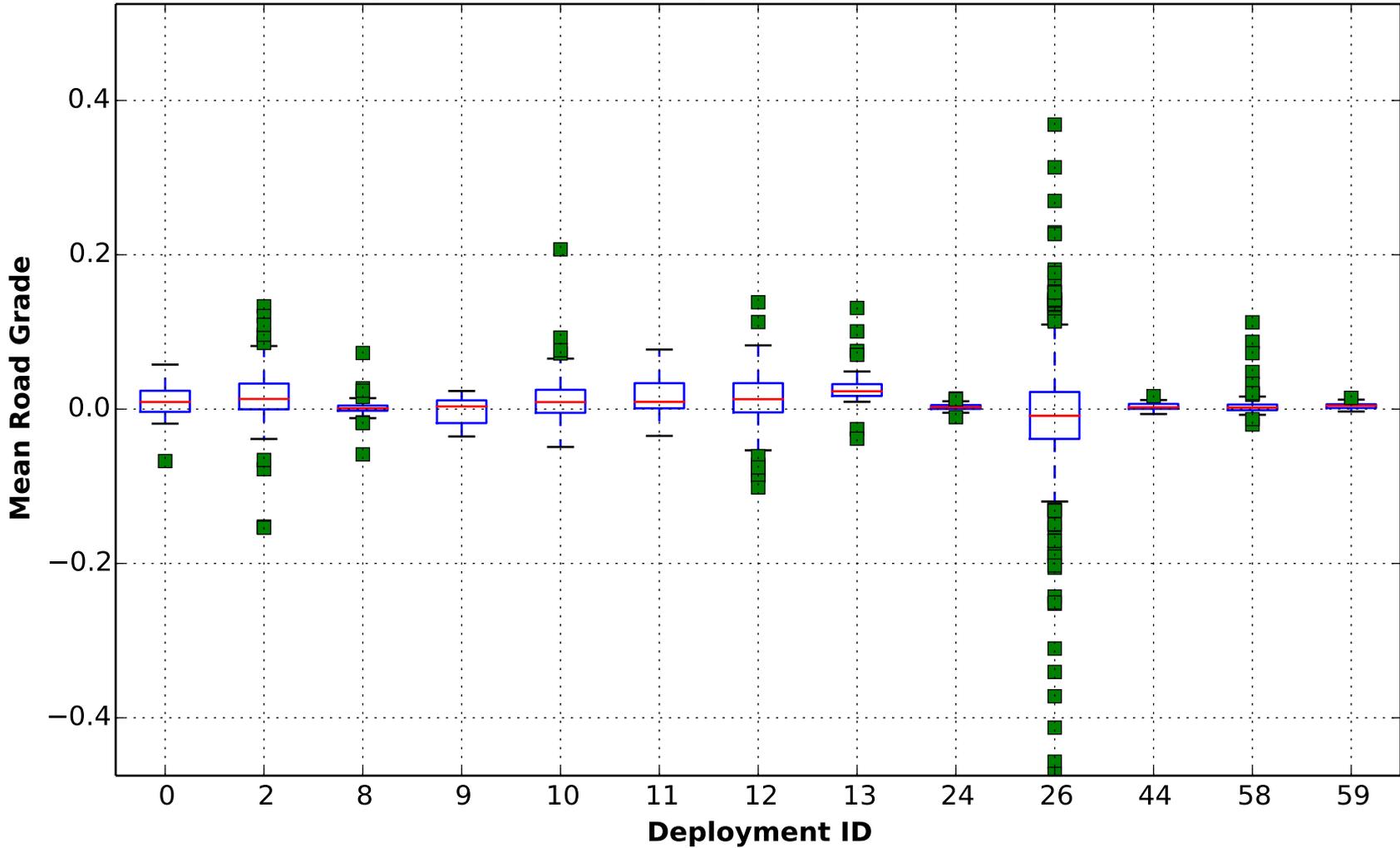


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Mean Road Grade by Deployment for Class 8 Tractors

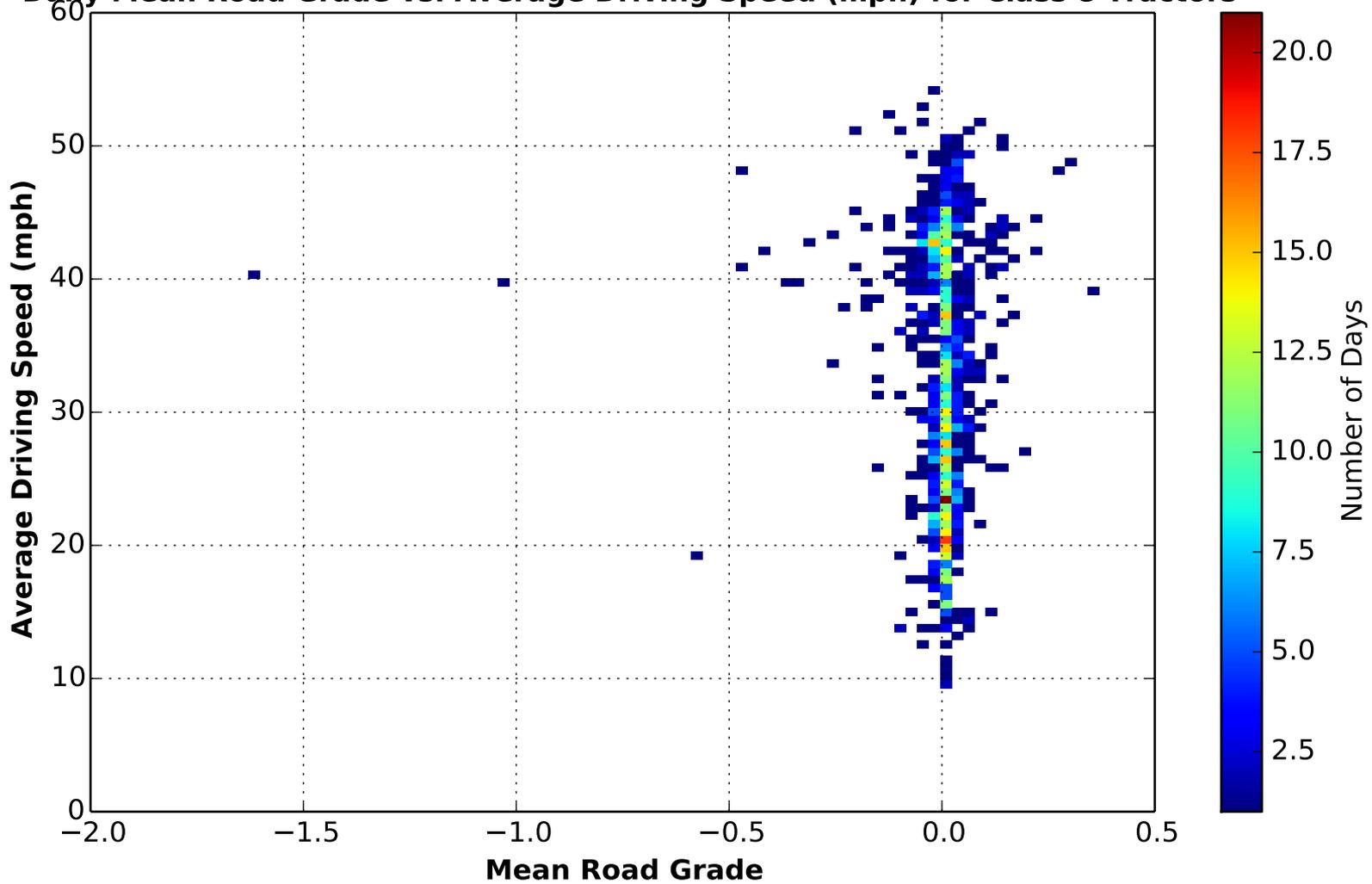


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1147

Daily Mean Road Grade vs. Average Driving Speed (mph) for Class 8 Tractors

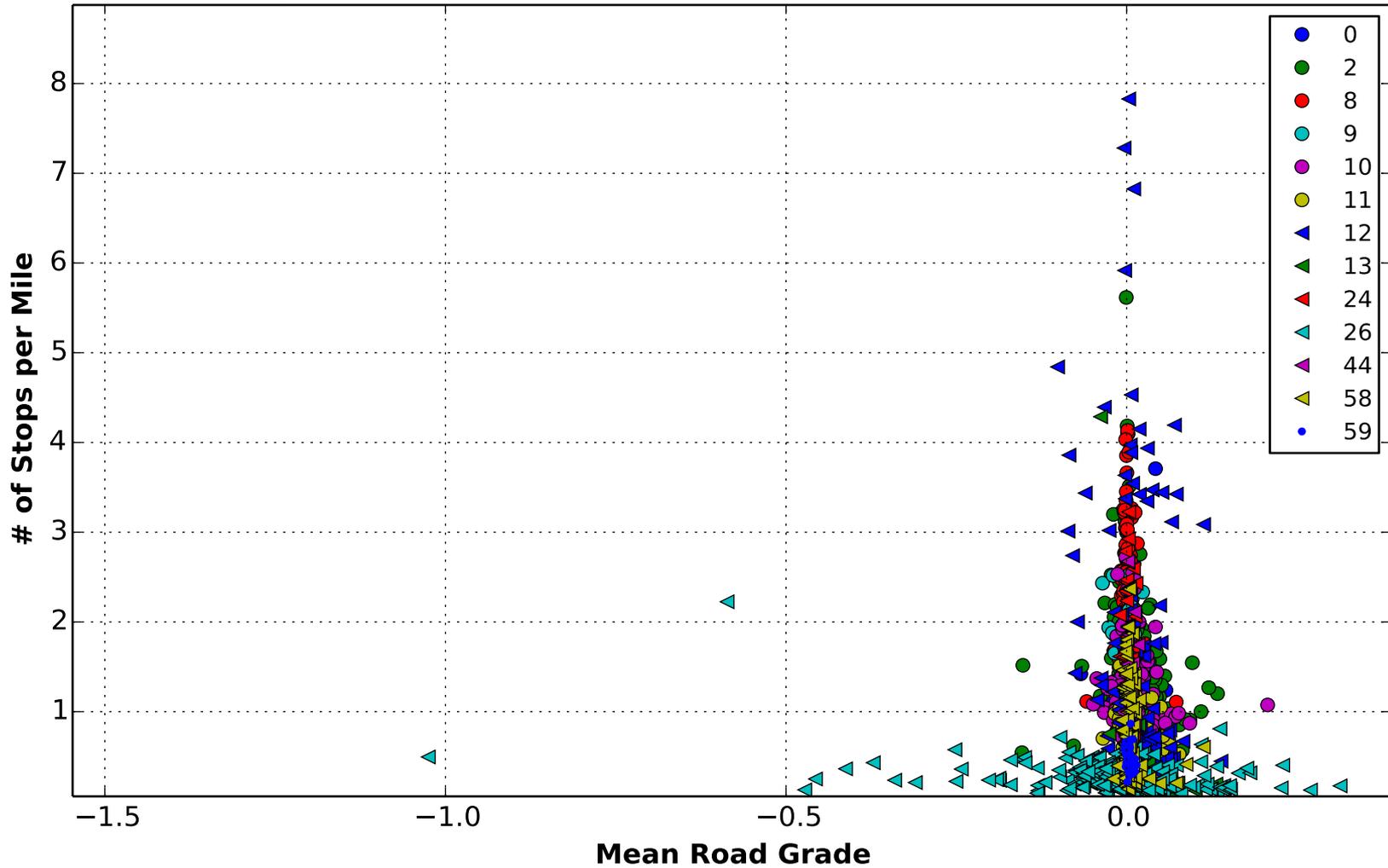


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Mean Road Grade vs. # of Stops per Mile for Class 8 Tractors

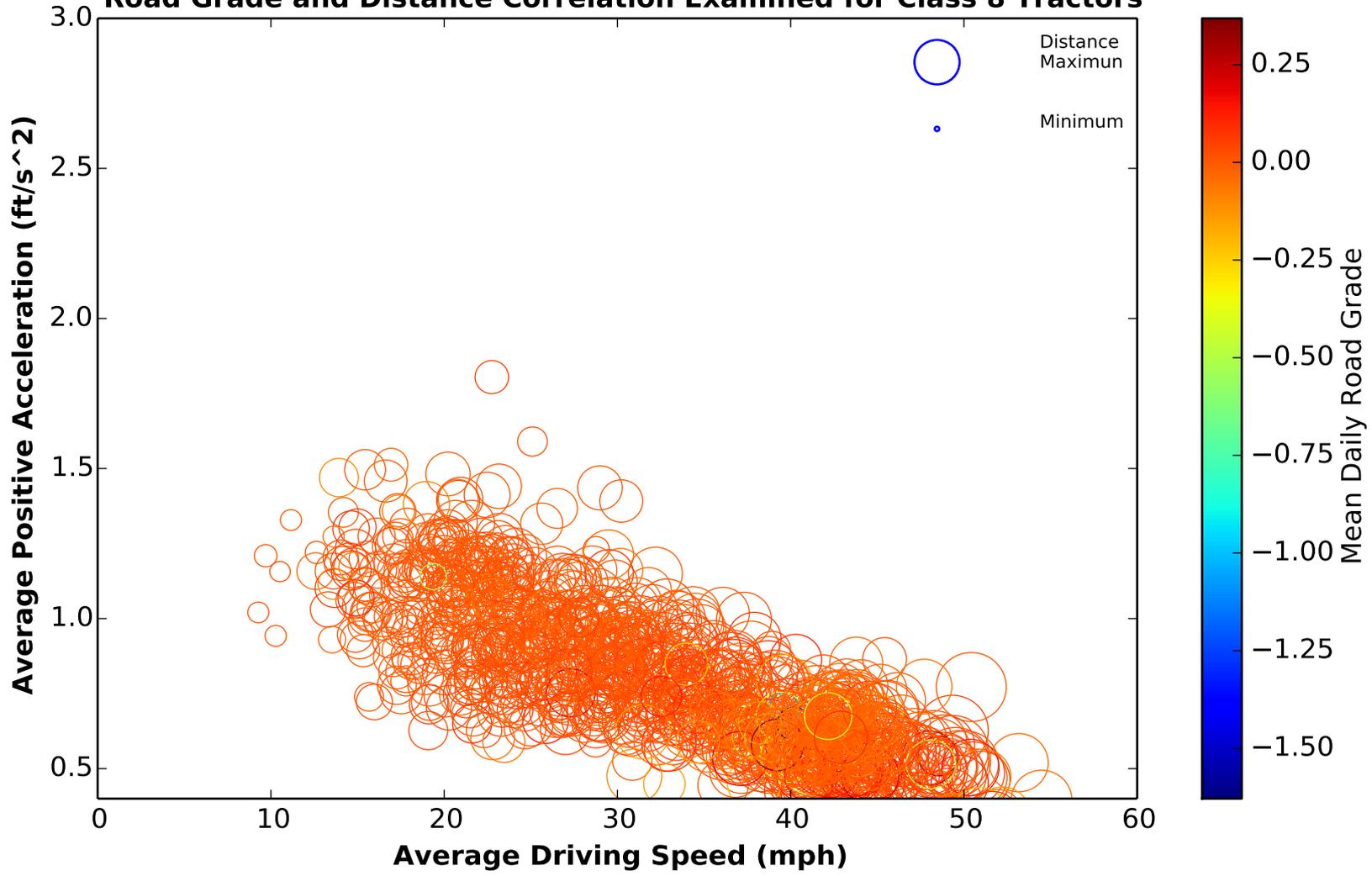


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1146

Road Grade and Distance Correlation Examined for Class 8 Tractors

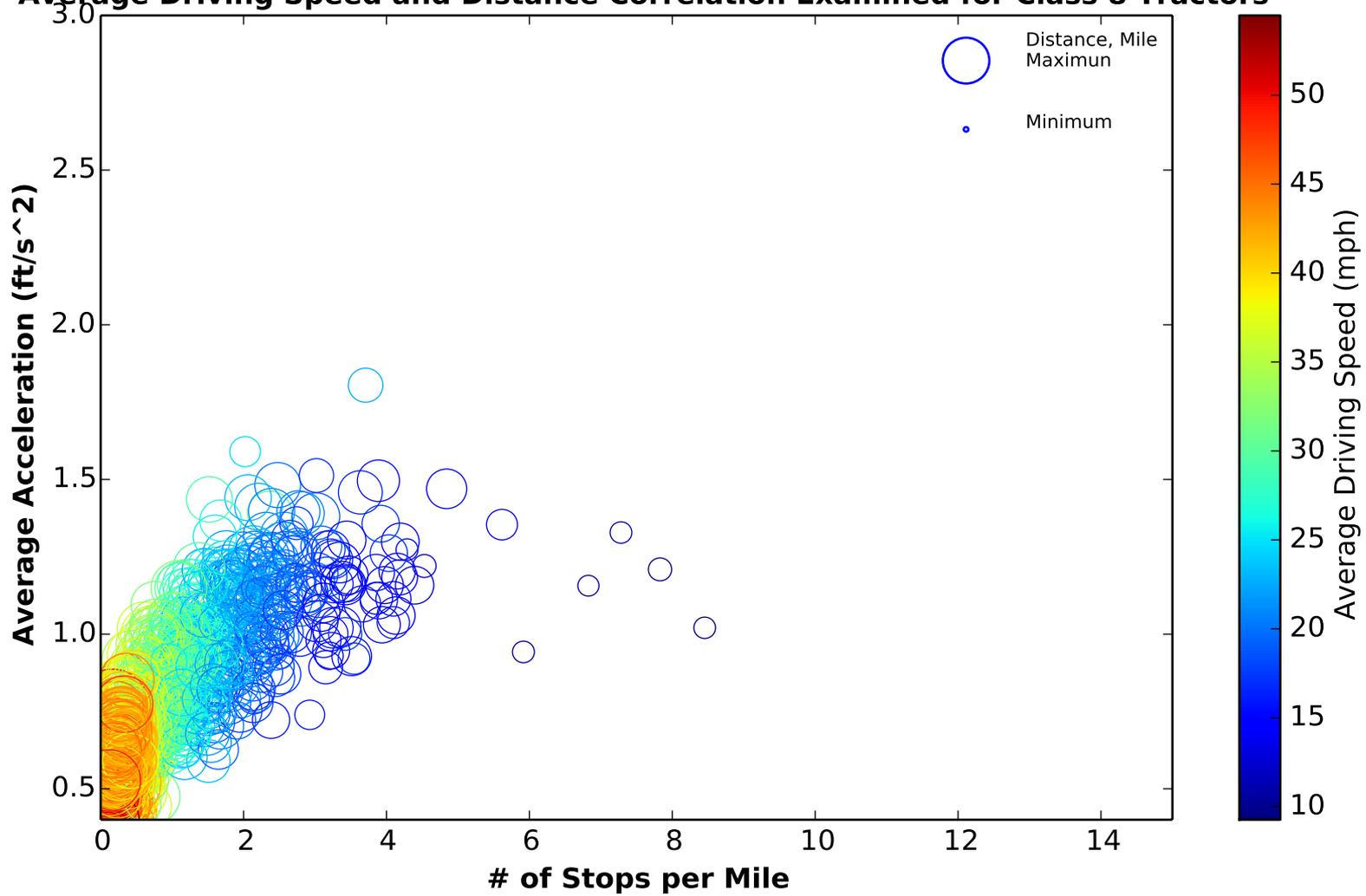


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Average Driving Speed and Distance Correlation Examined for Class 8 Tractors

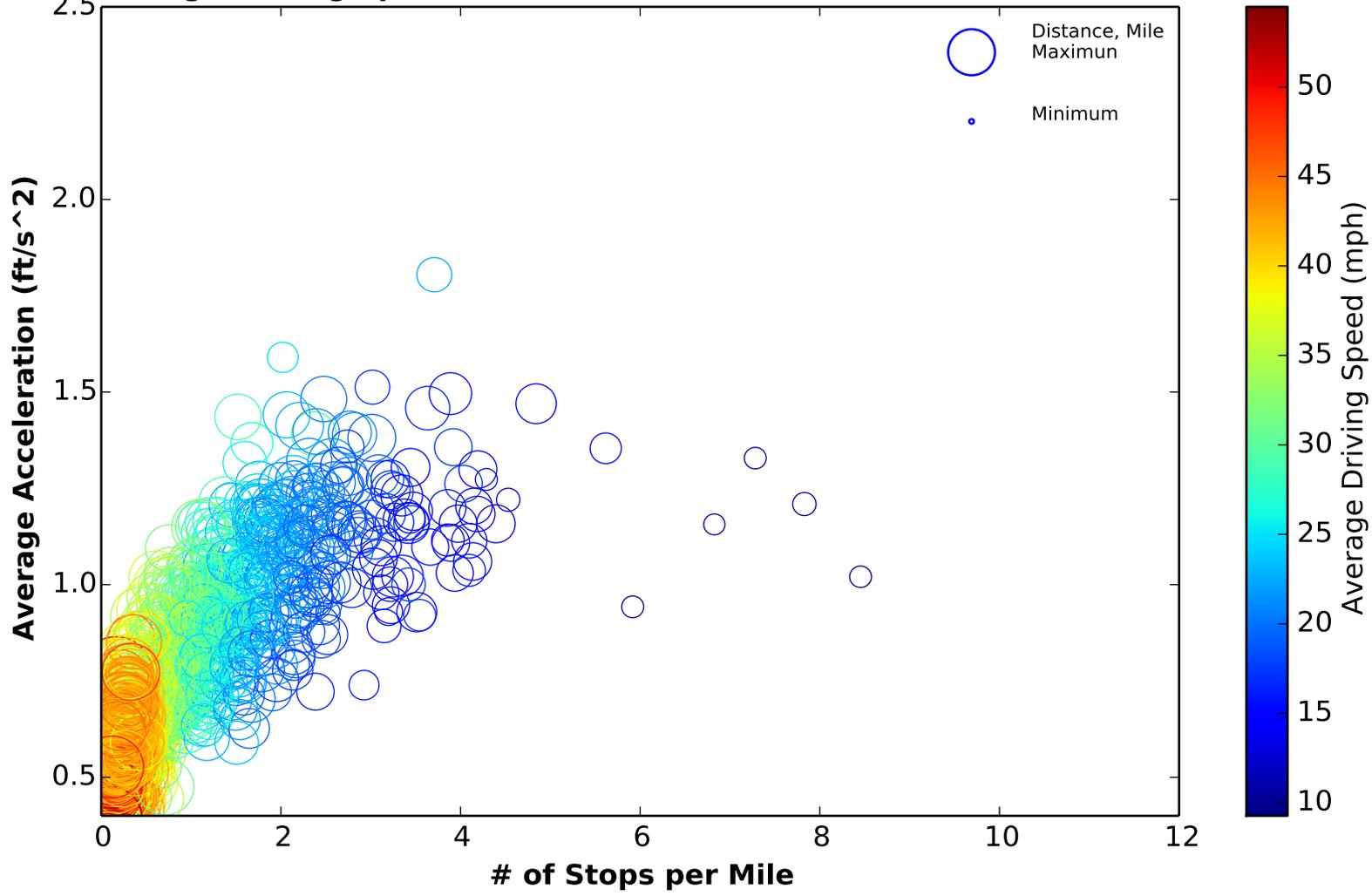


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Detailed Average Driving Speed and Distance Correlation Examined for Class 8 Tractors

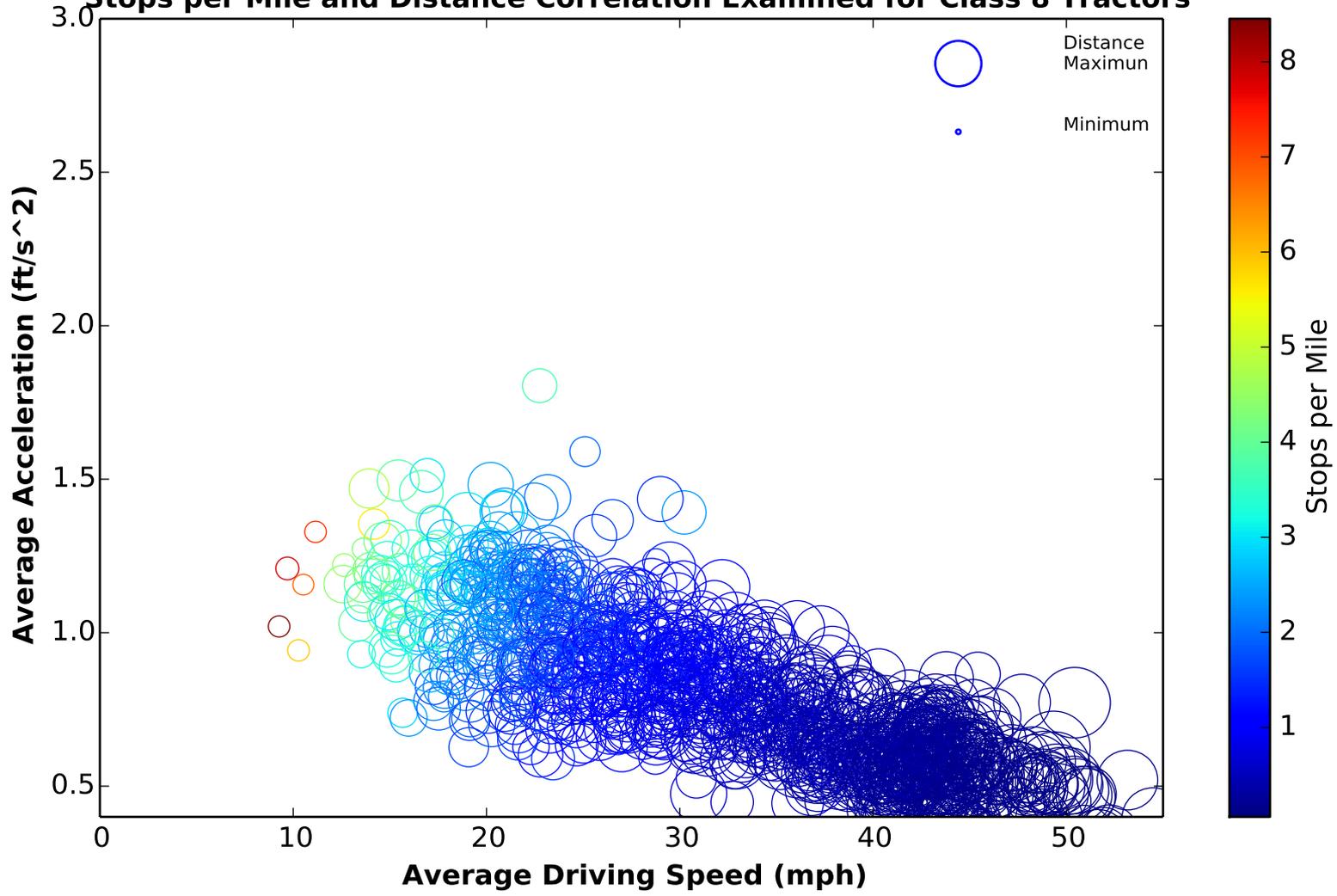


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Stops per Mile and Distance Correlation Examined for Class 8 Tractors

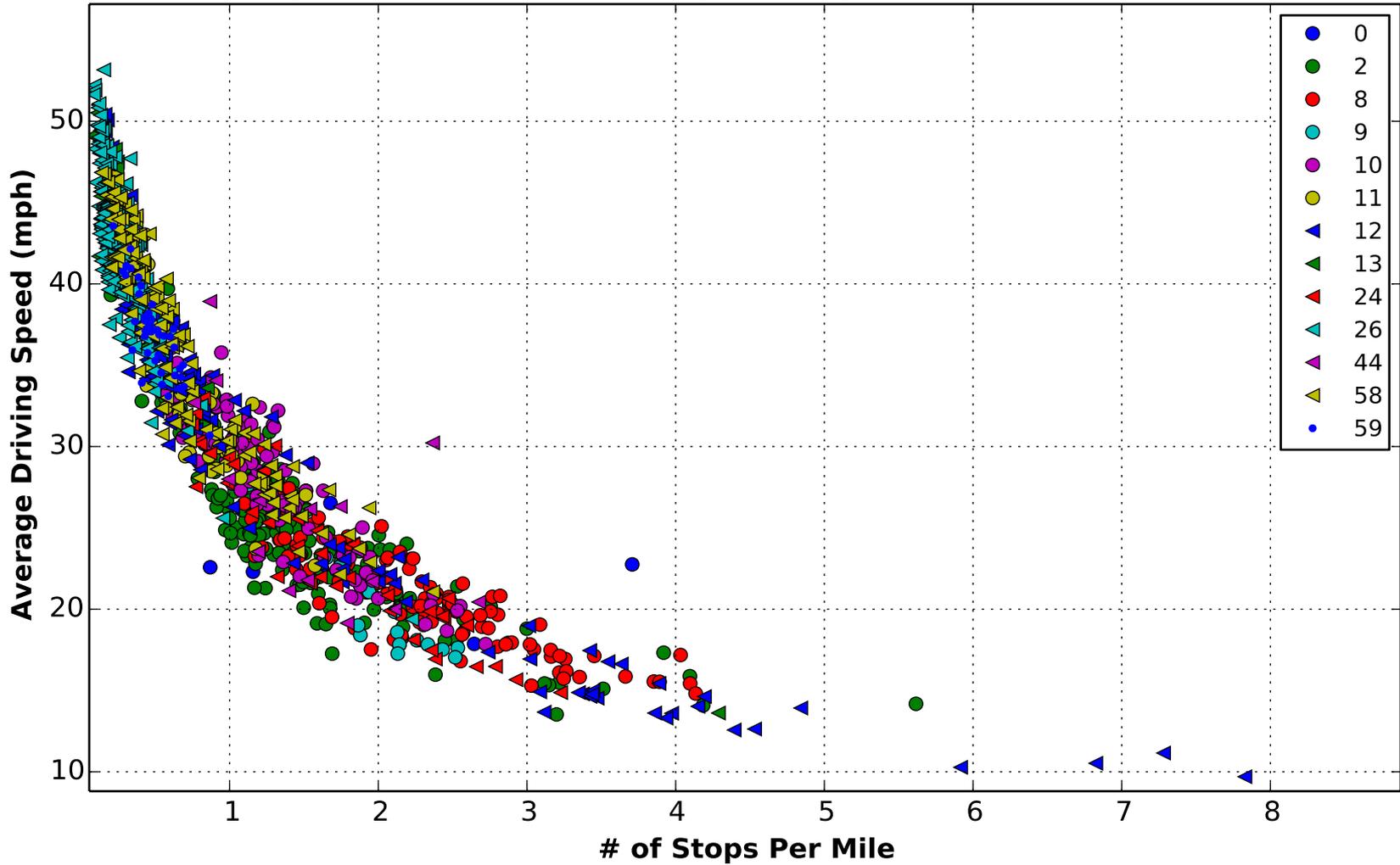


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Stops per Mile vs. Average Driving Speed for Class 8 Tractors

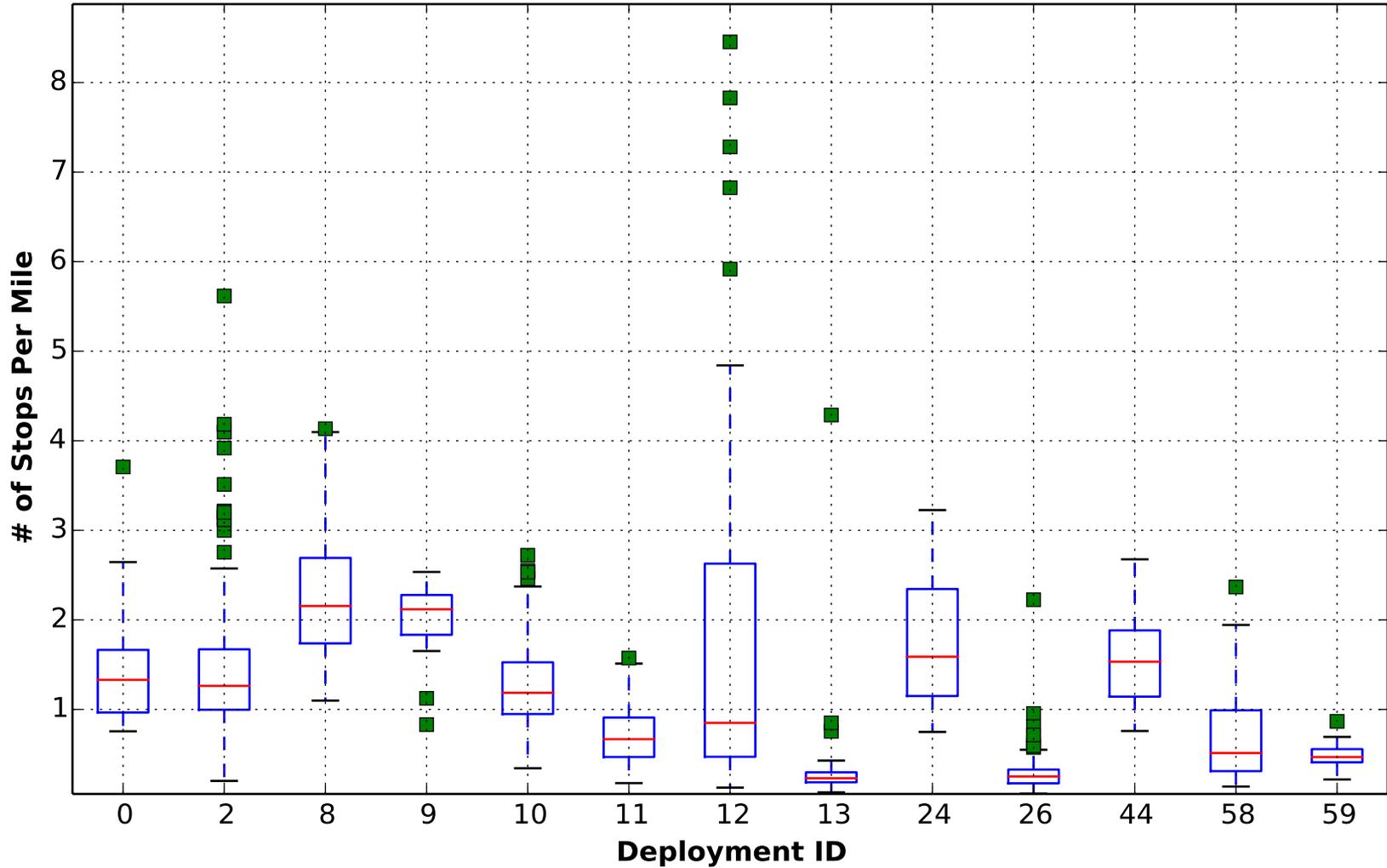


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1147

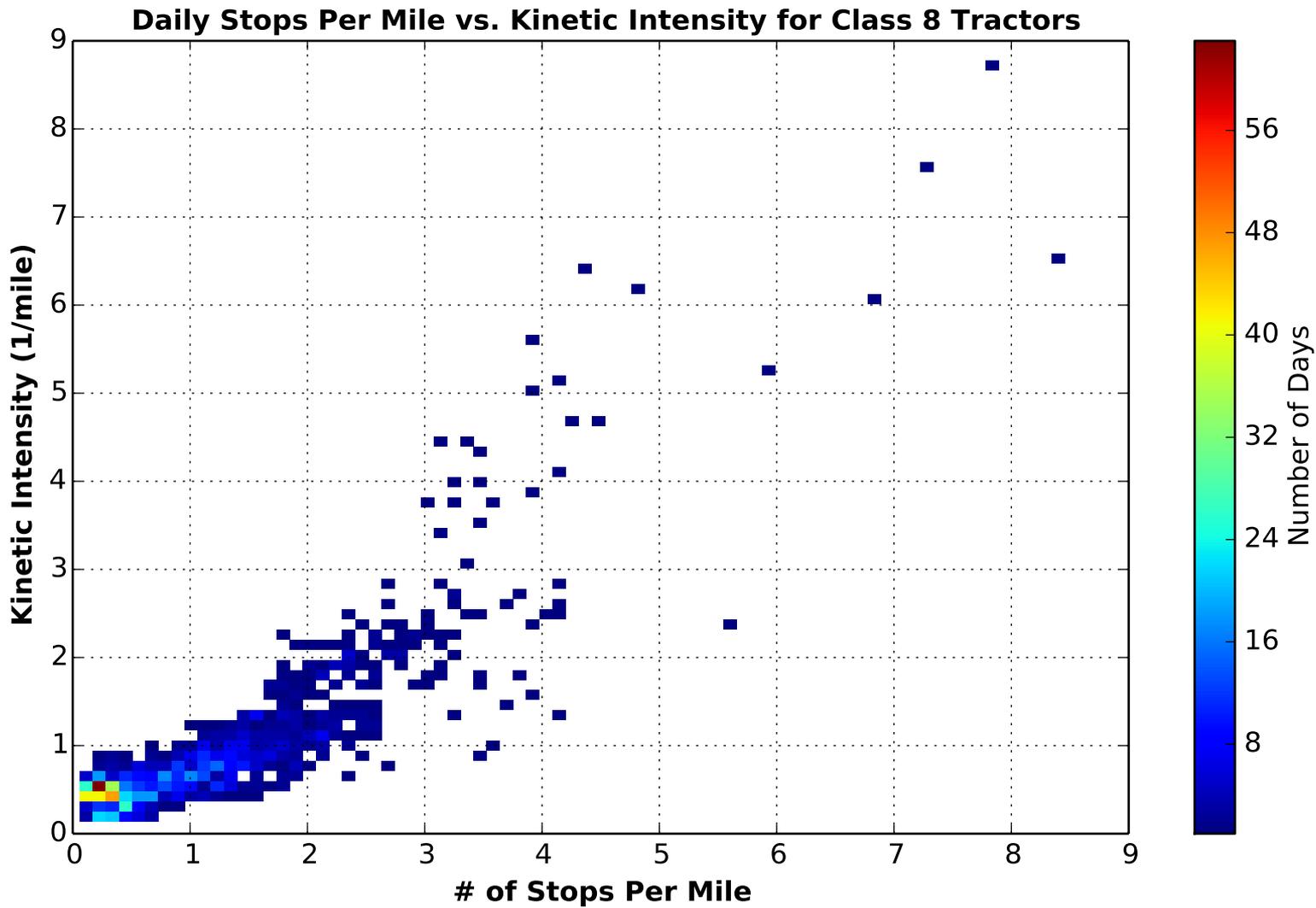
Stops Per Mile by Deployment for Class 8 Tractors



of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

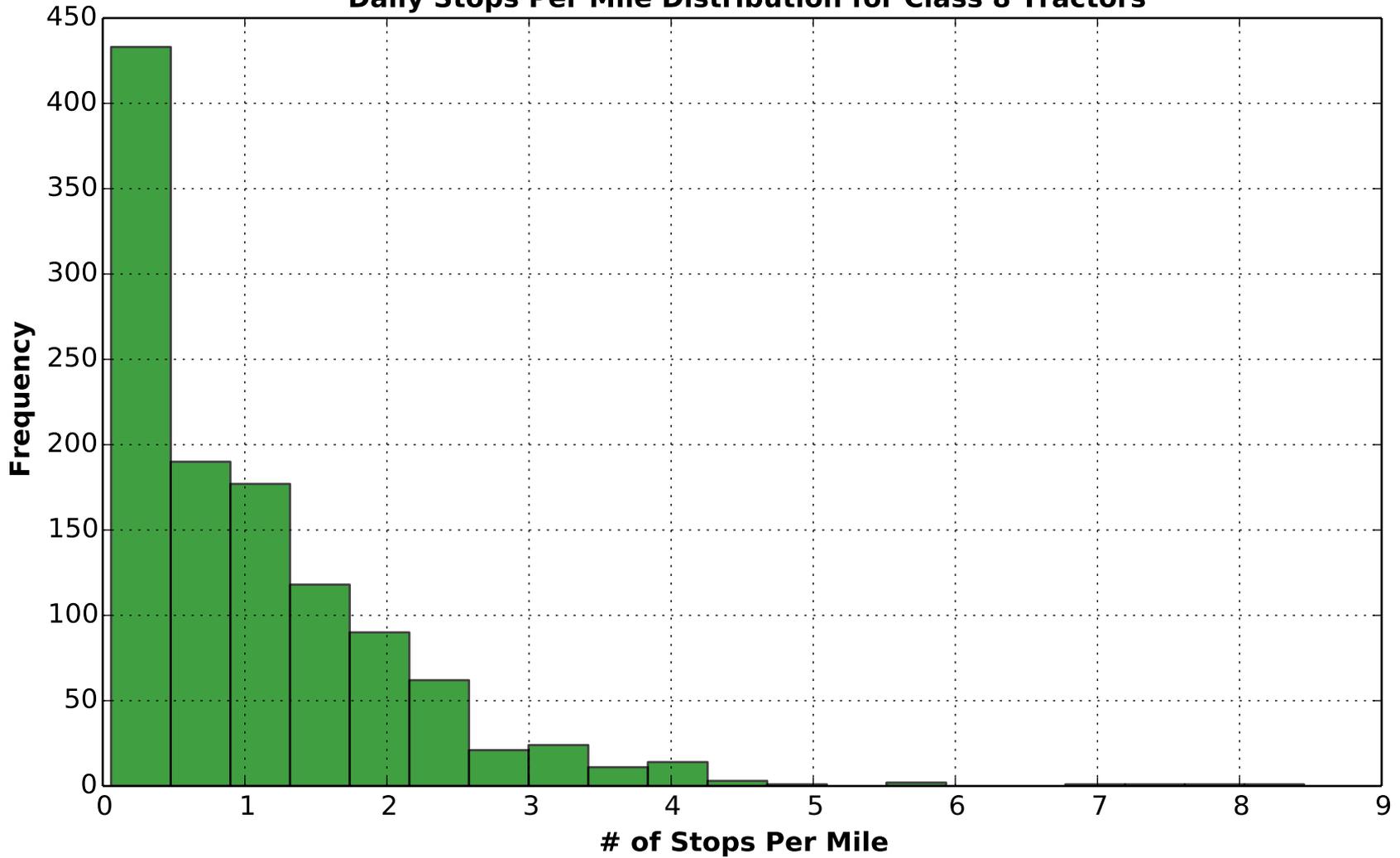


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Stops Per Mile Distribution for Class 8 Tractors

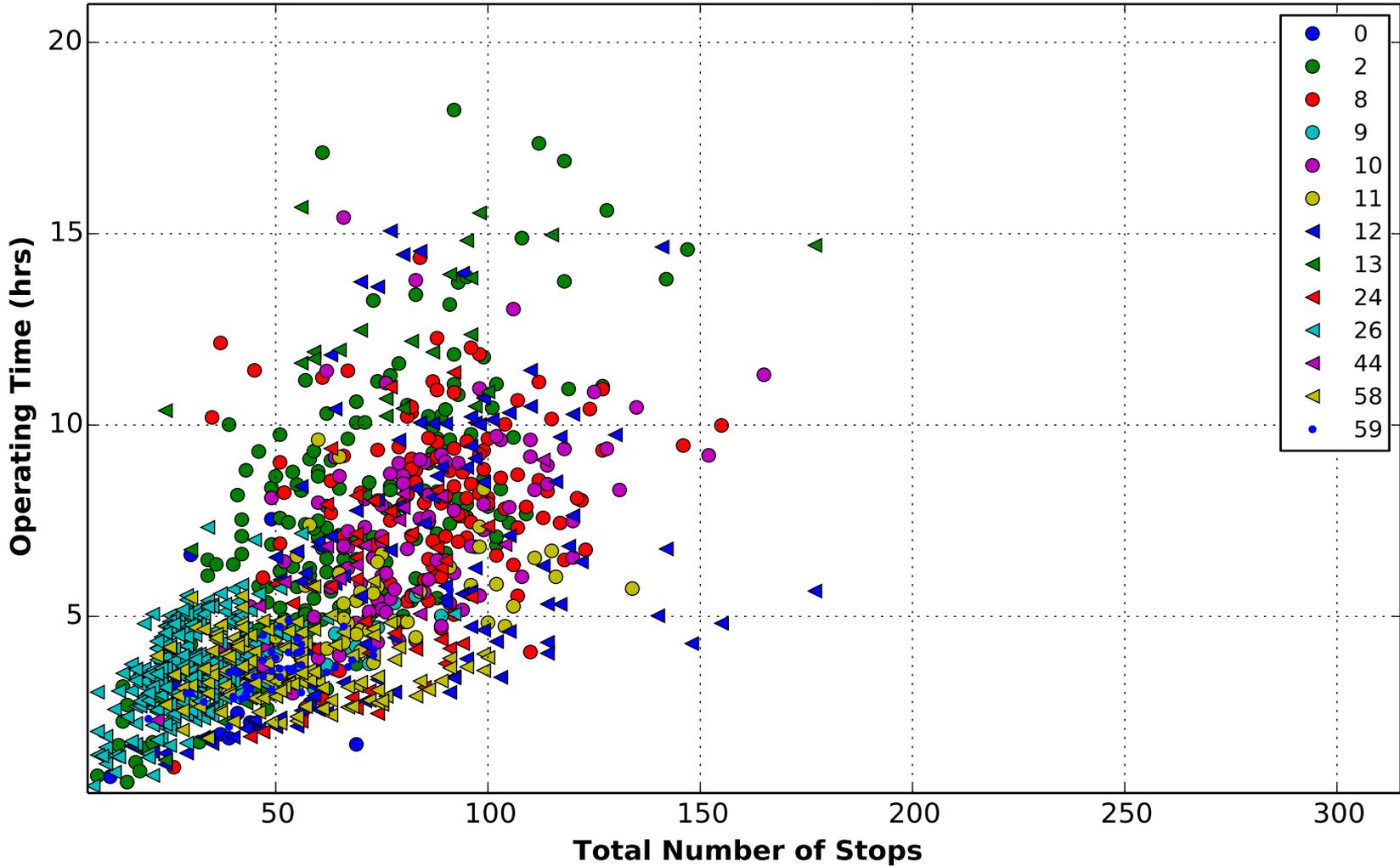


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Total Number of Stops vs. Operating Time for Class 8 Tractors

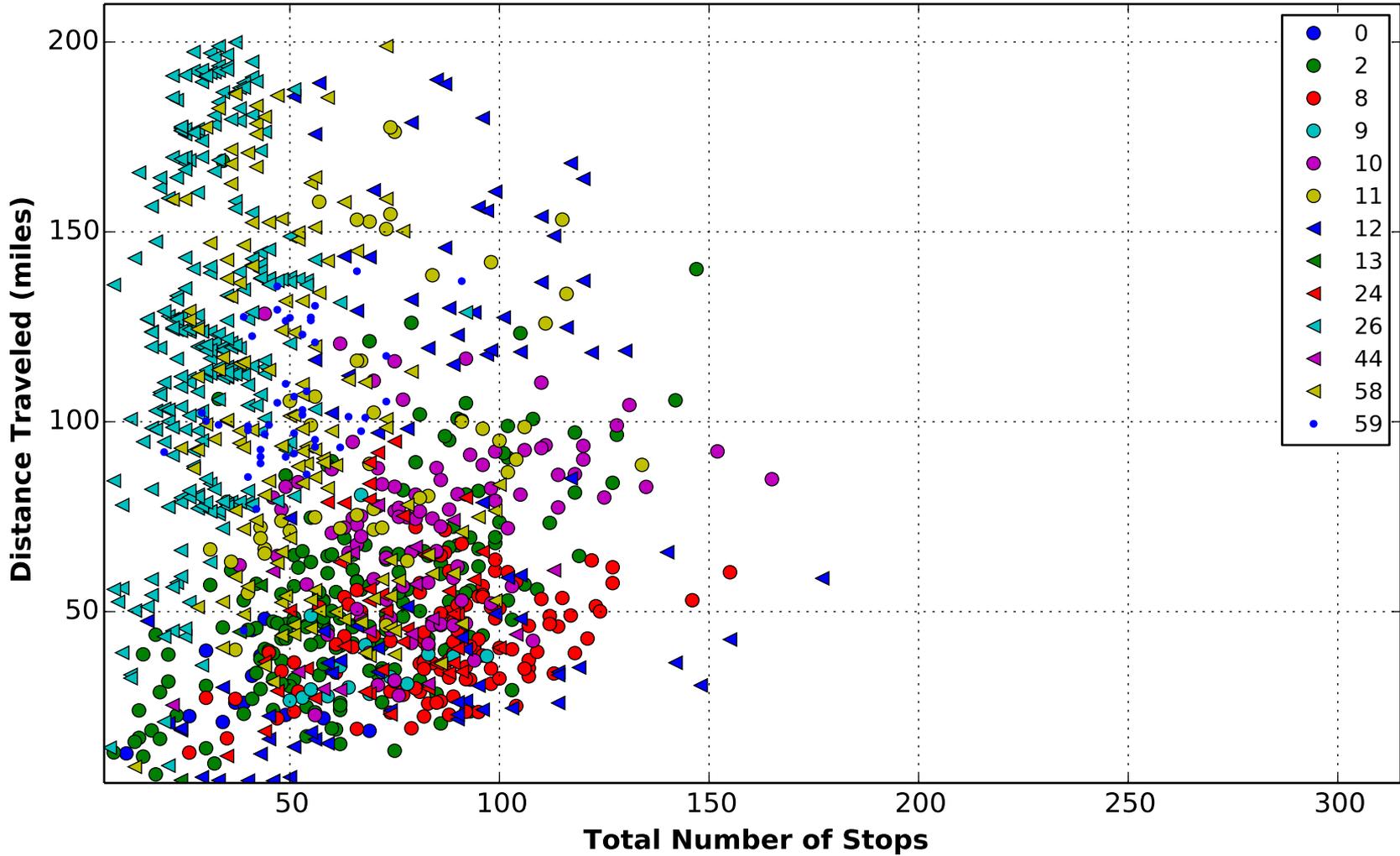


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1145

Daily Total Number of Stops vs. Distance Traveled for Class 8 Tractors

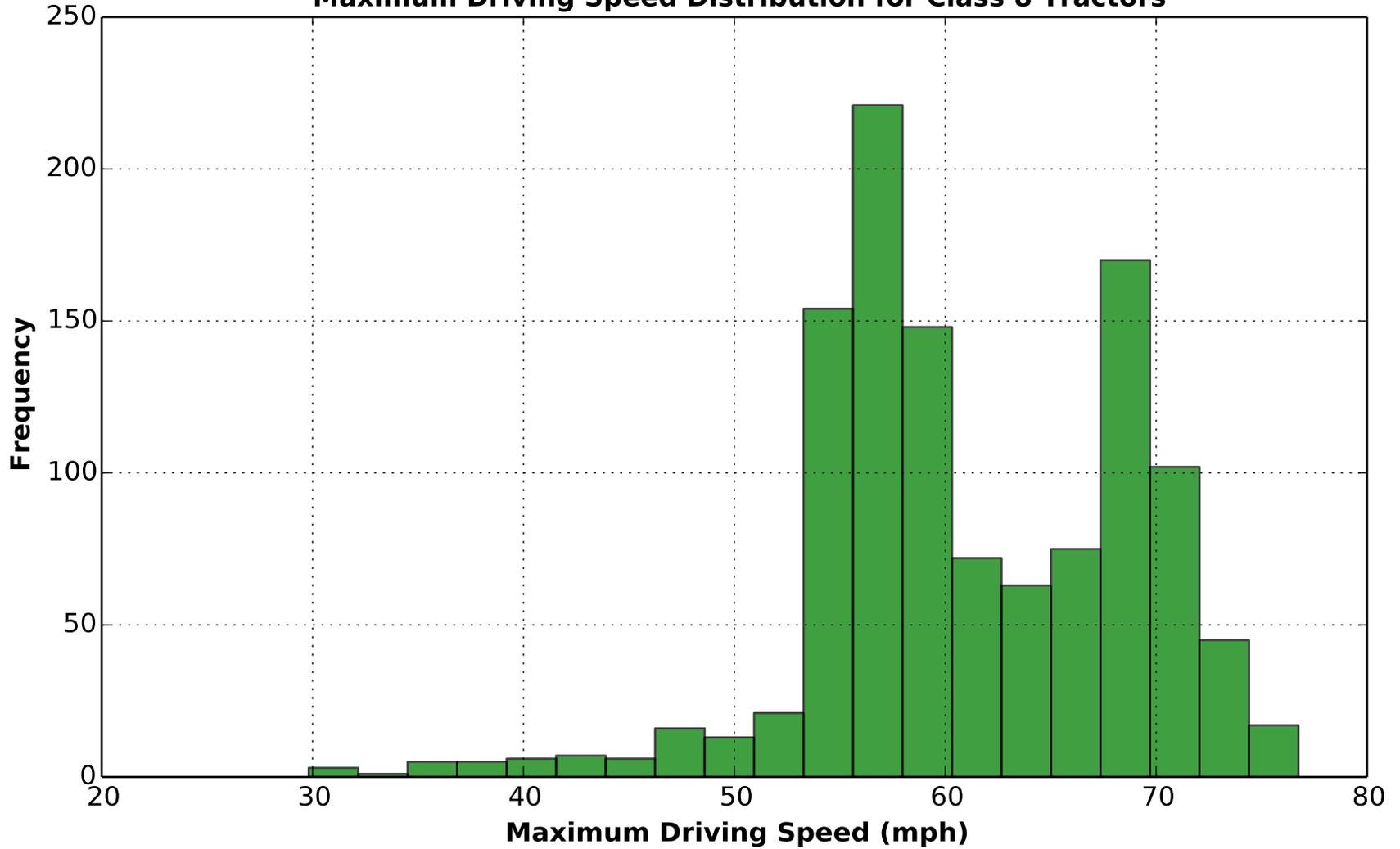


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1082

Maximum Driving Speed Distribution for Class 8 Tractors

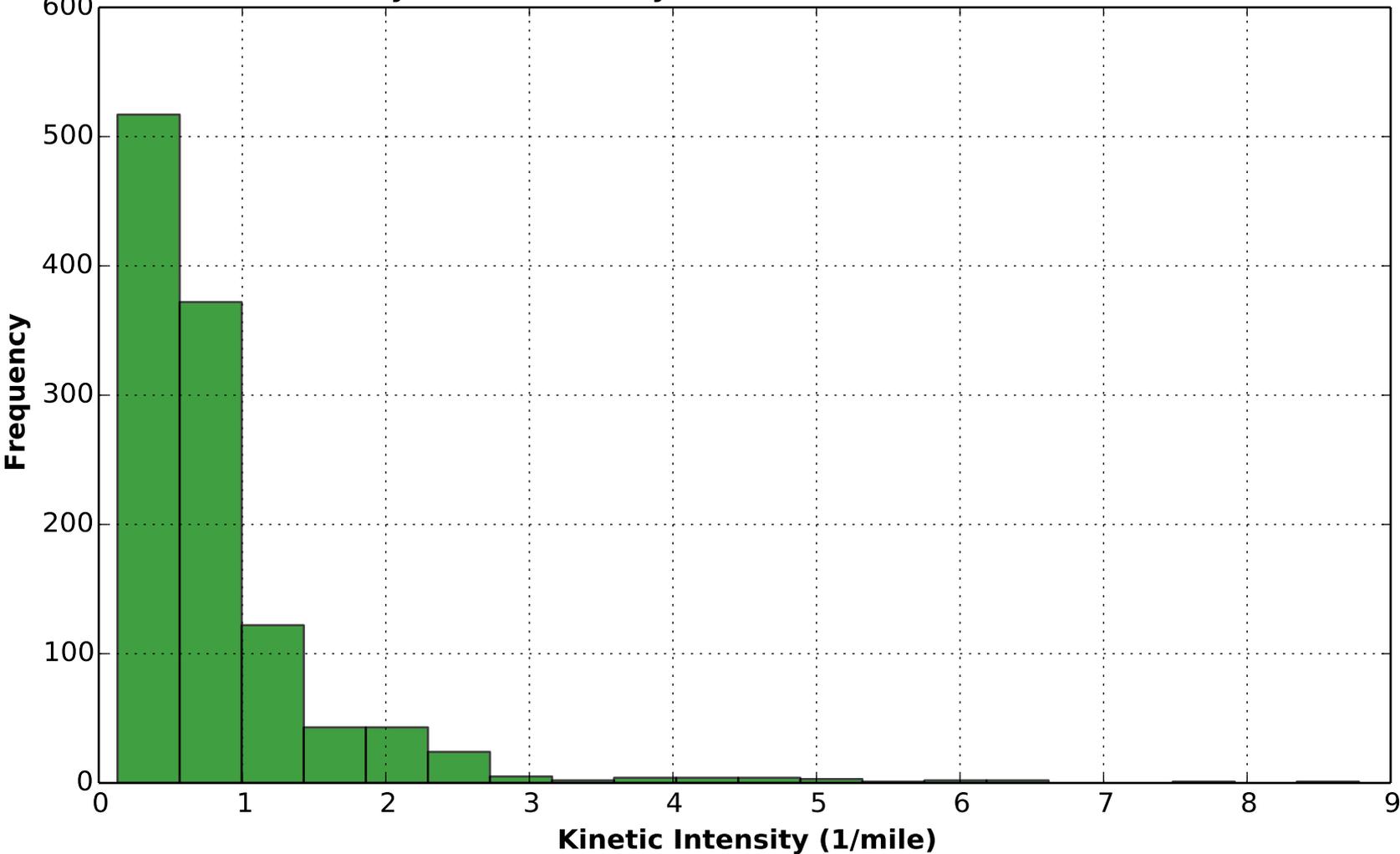


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Kinetic Intensity Distribution for Class 8 Tractors

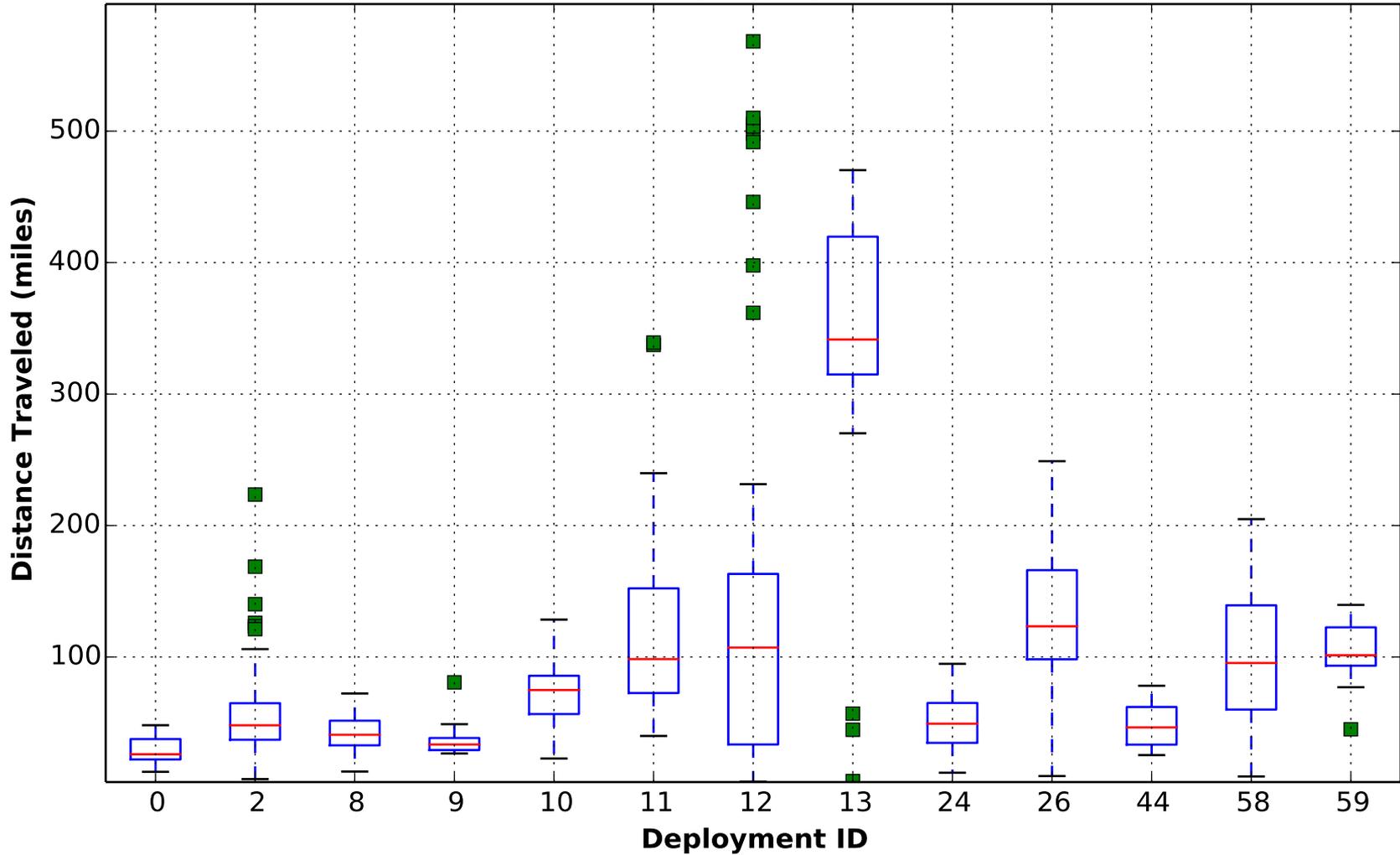


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Distance Traveled by Deployment for Class 8 Tractors

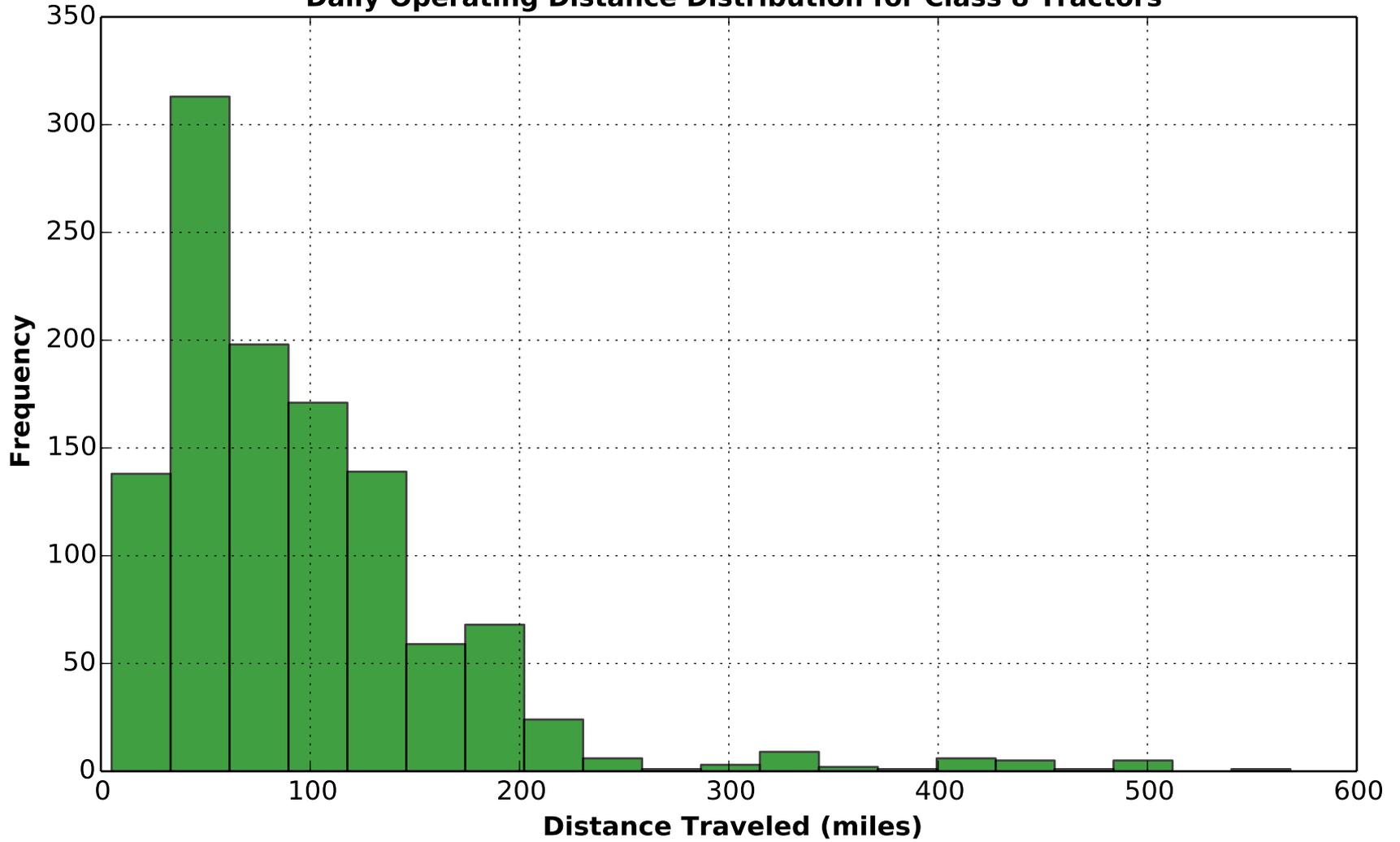


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Operating Distance Distribution for Class 8 Tractors

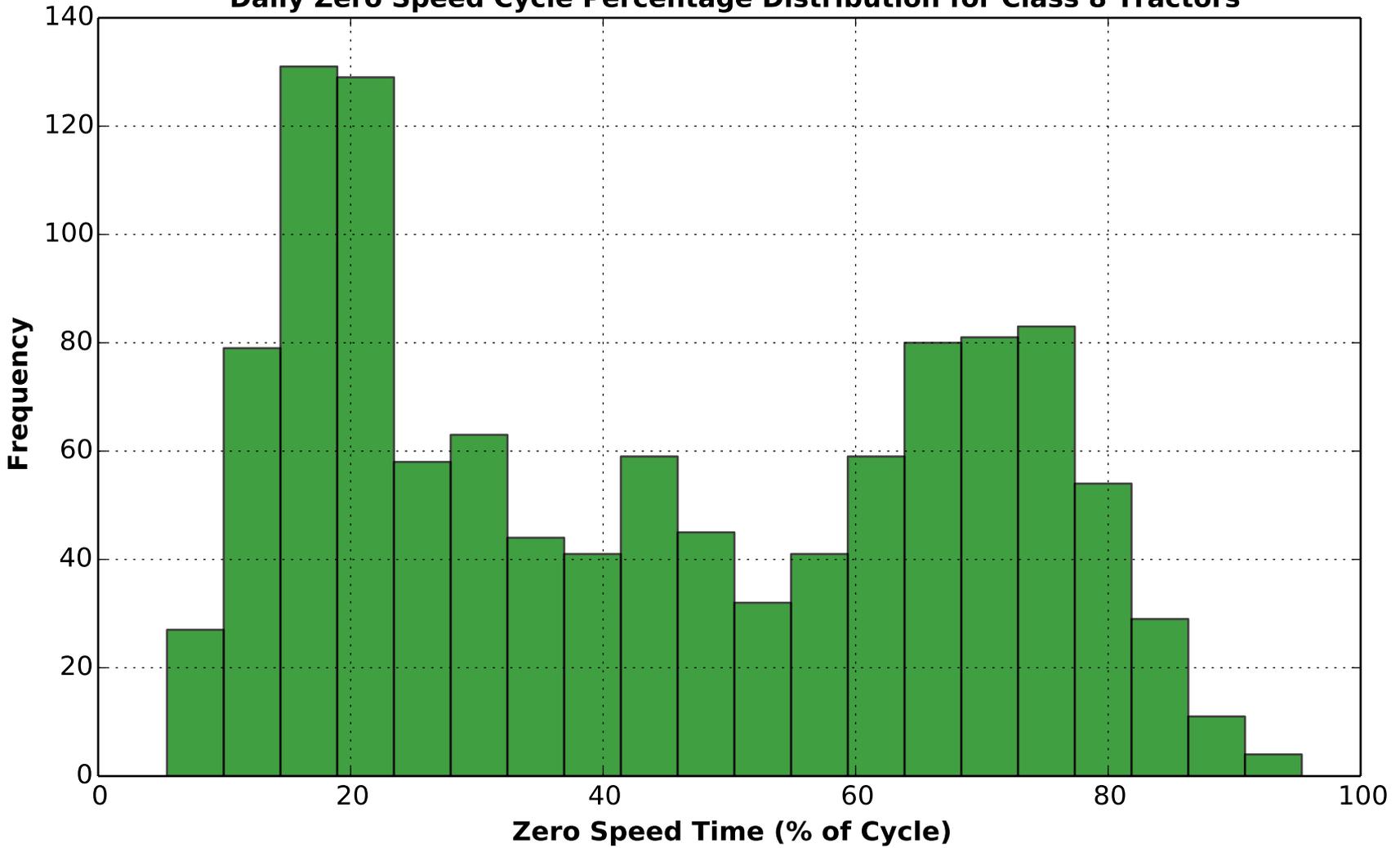


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Zero Speed Cycle Percentage Distribution for Class 8 Tractors

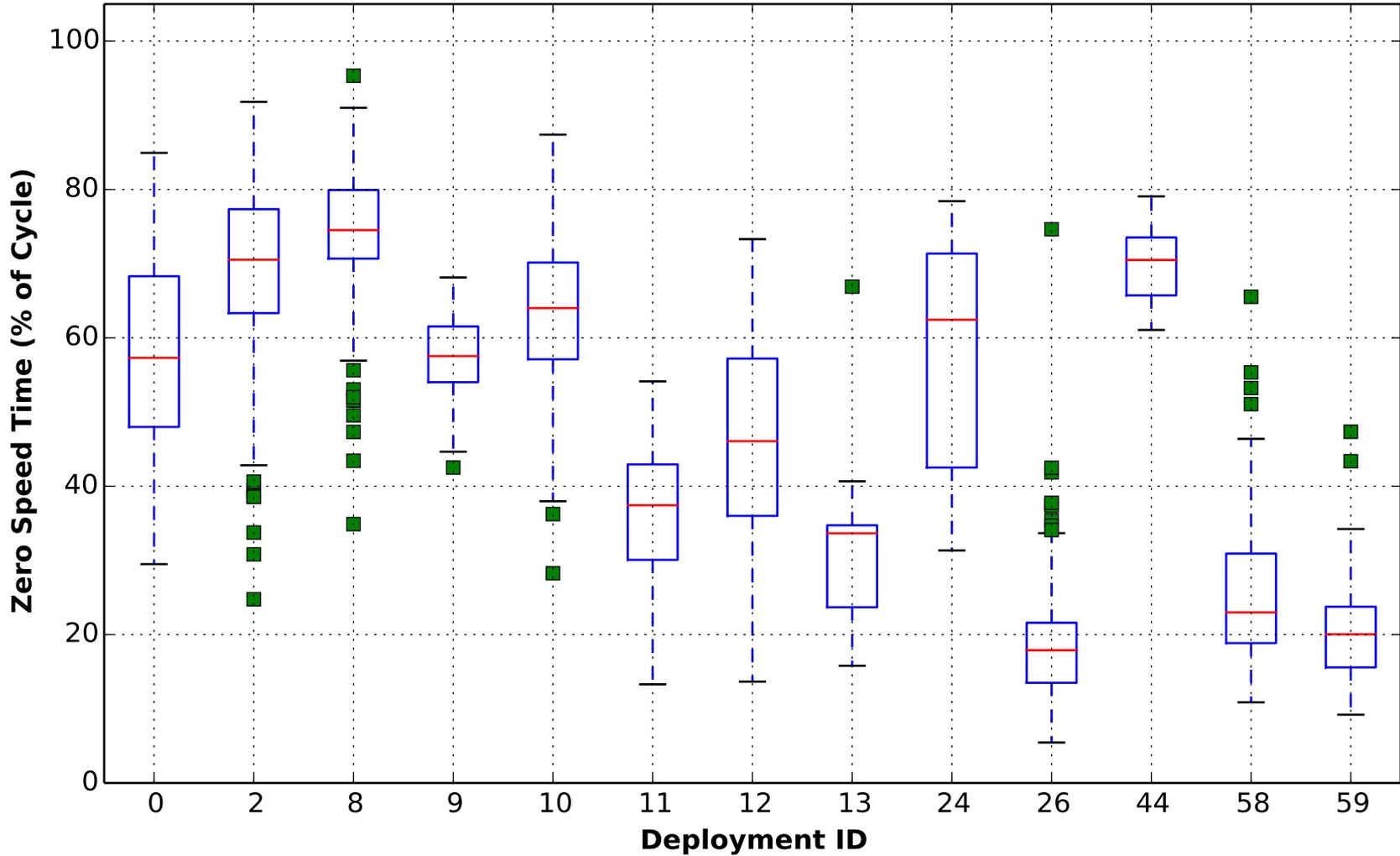


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Zero Speed Cycle Percentage by Deployment for Class 8 Tractors

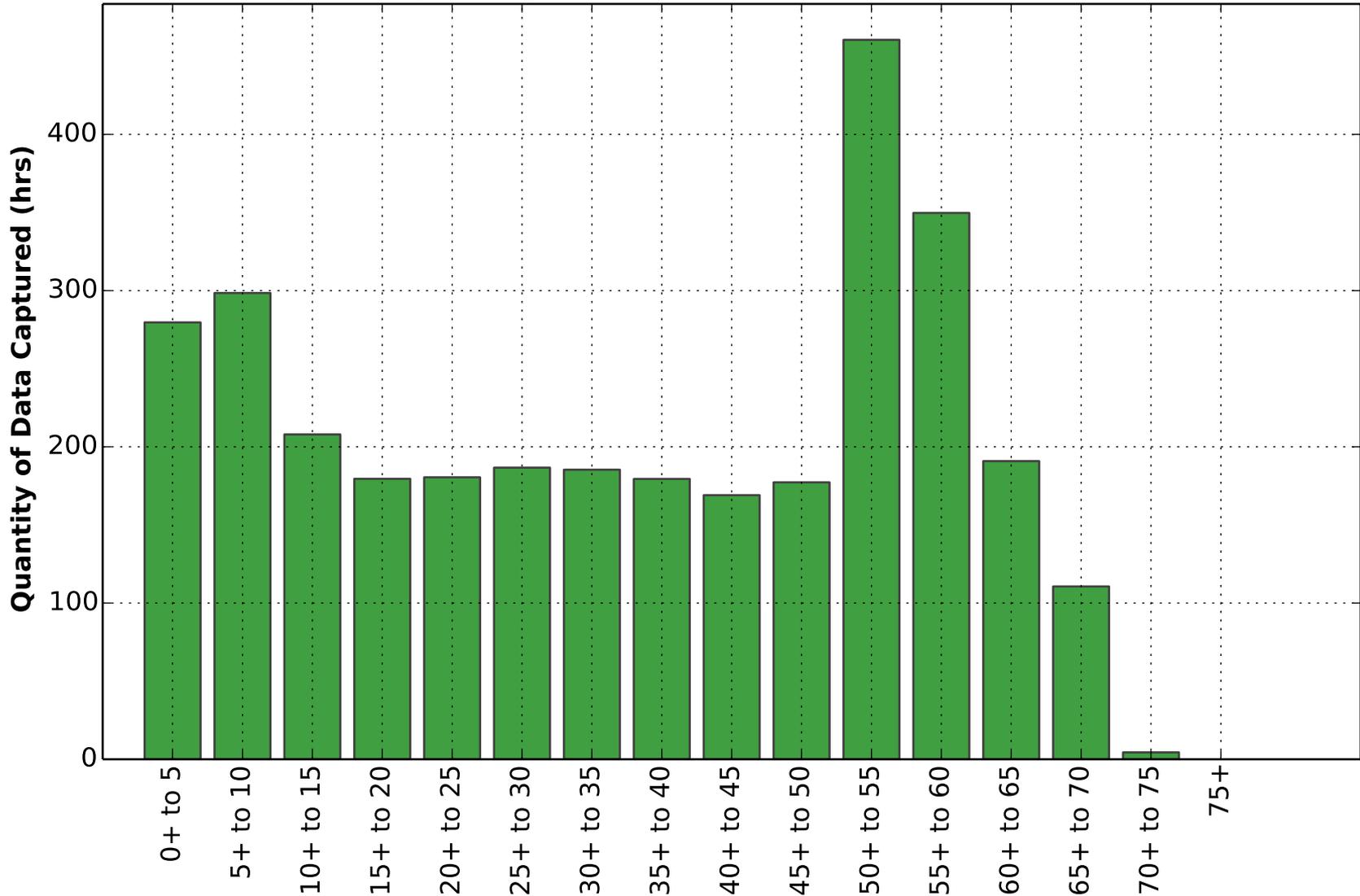


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Captured Operating Time by Speed Bin (mph) for Class 8 Tractors

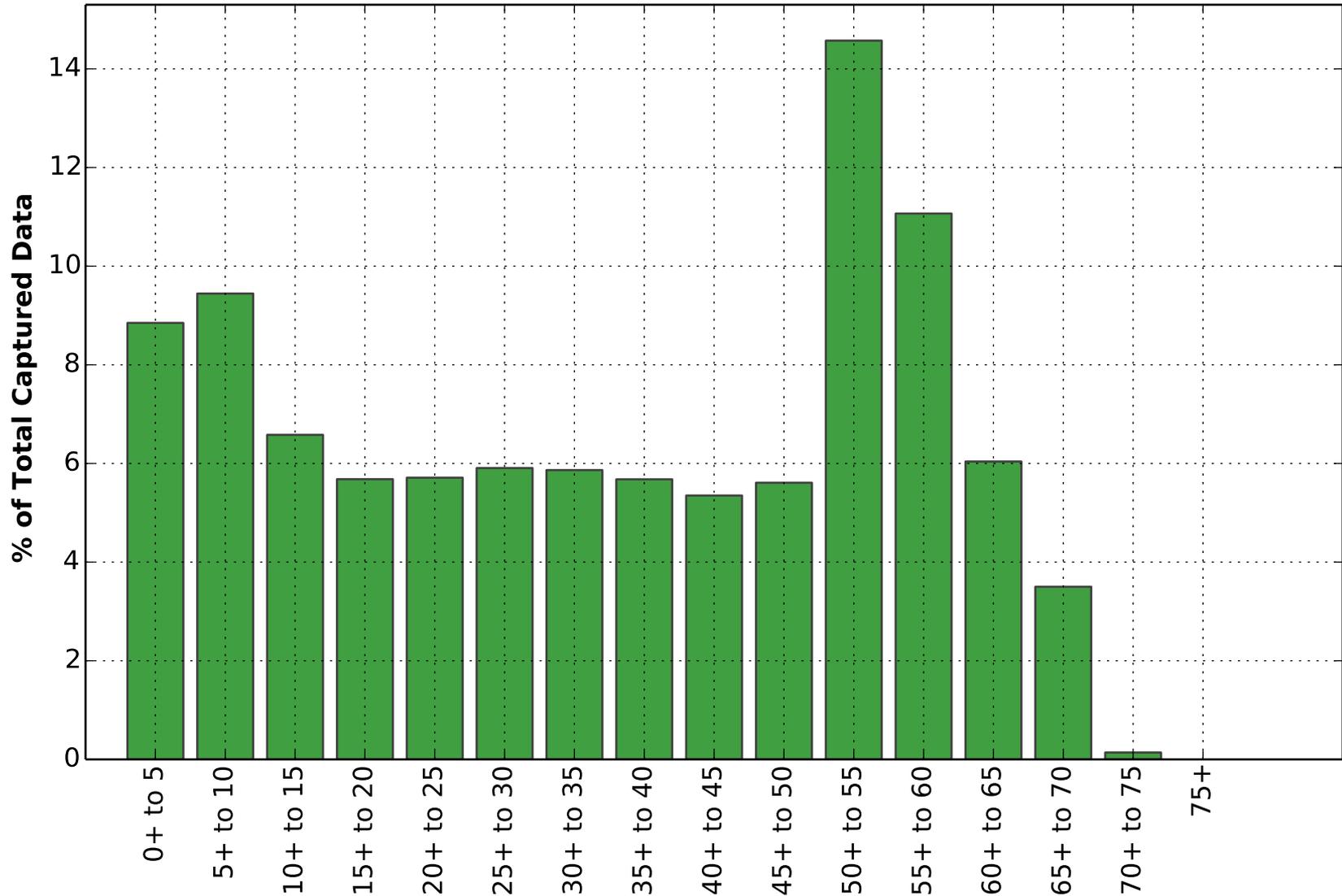


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Captured Operating Time by Speed Bin (mph) for Class 8 Tractors

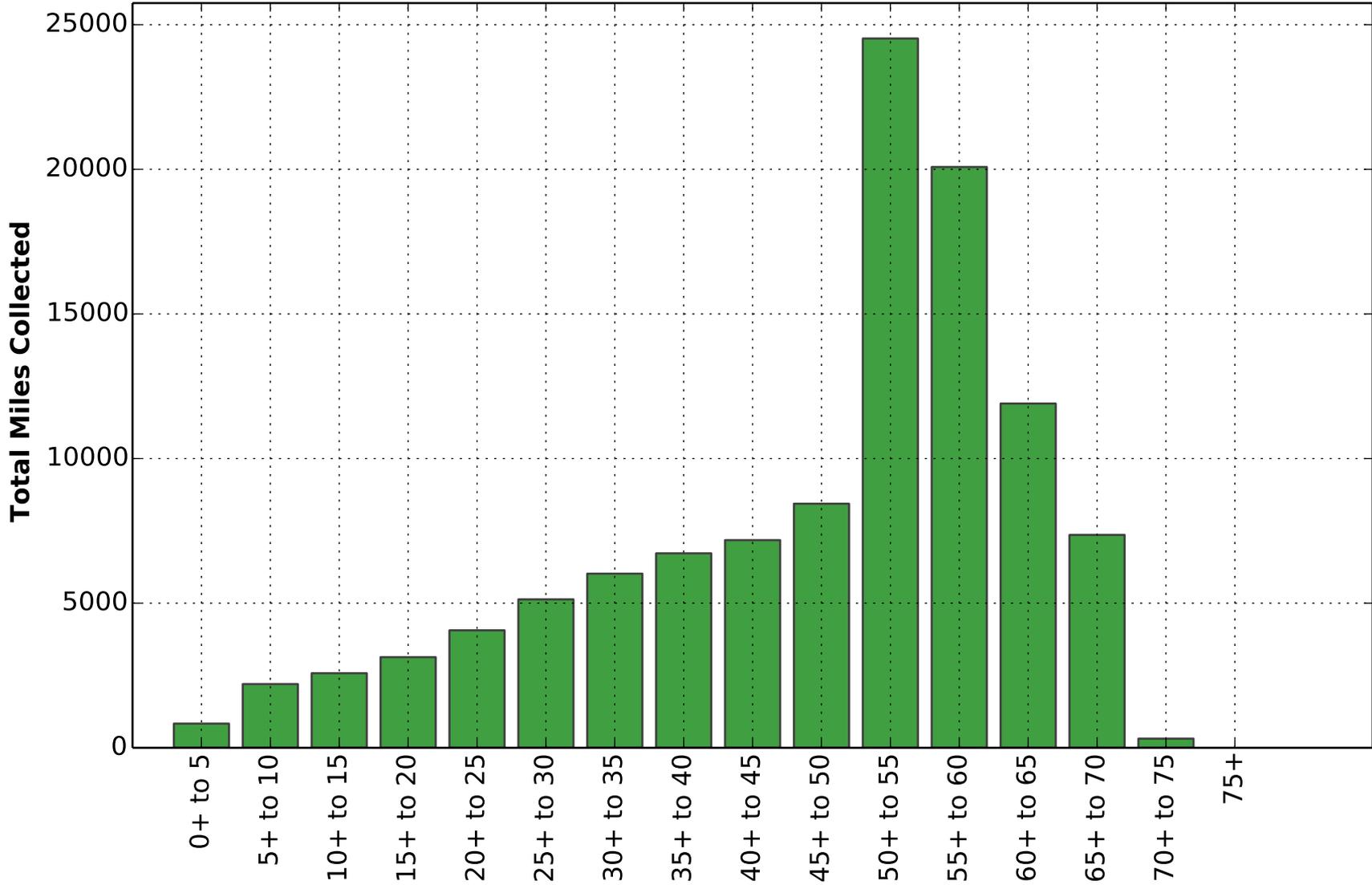


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Total Mileage Collected by Speed Bin (mph) for Class 8 Tractors

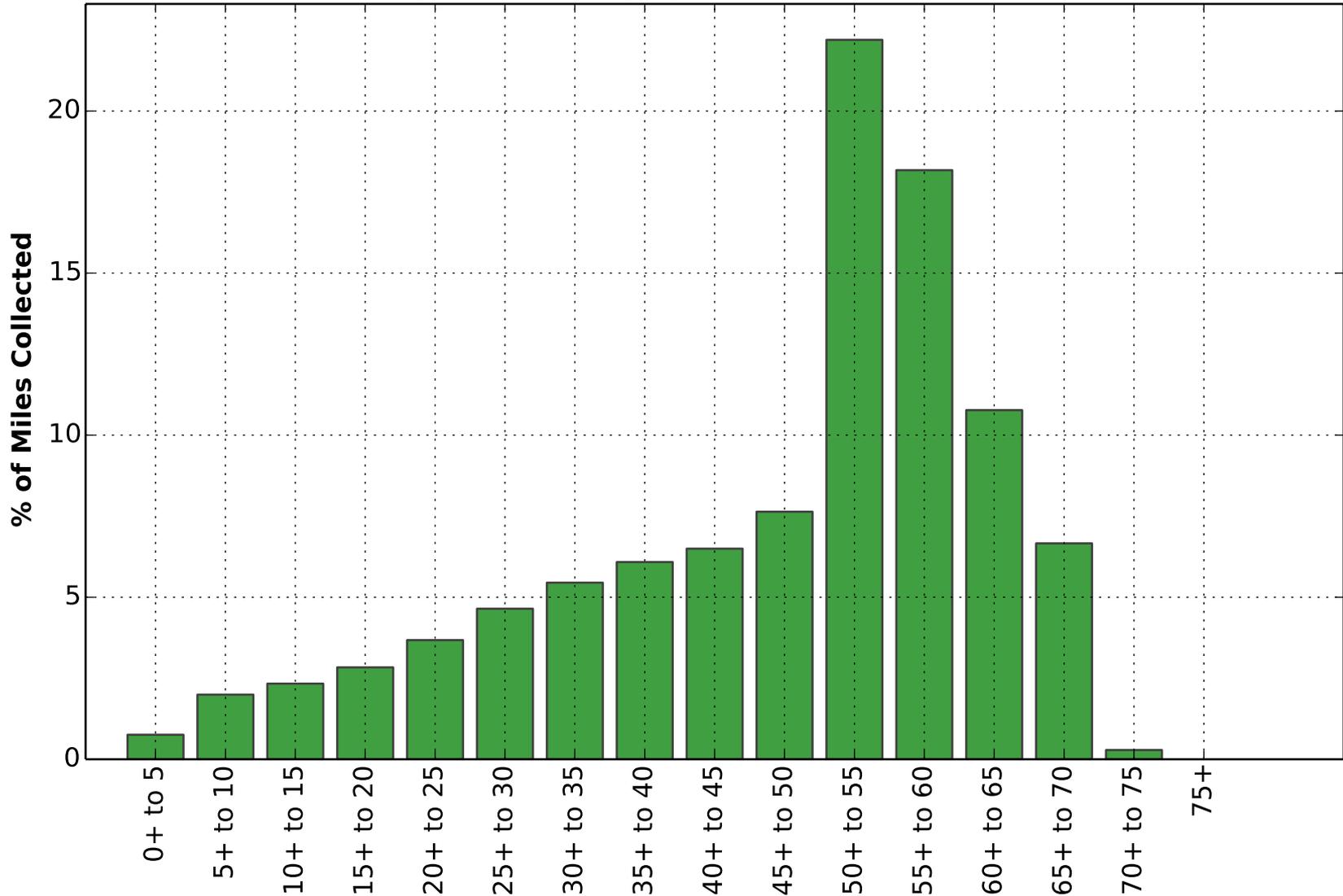


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Total Mileage Collected by Speed Bin (mph) for Class 8 Tractors

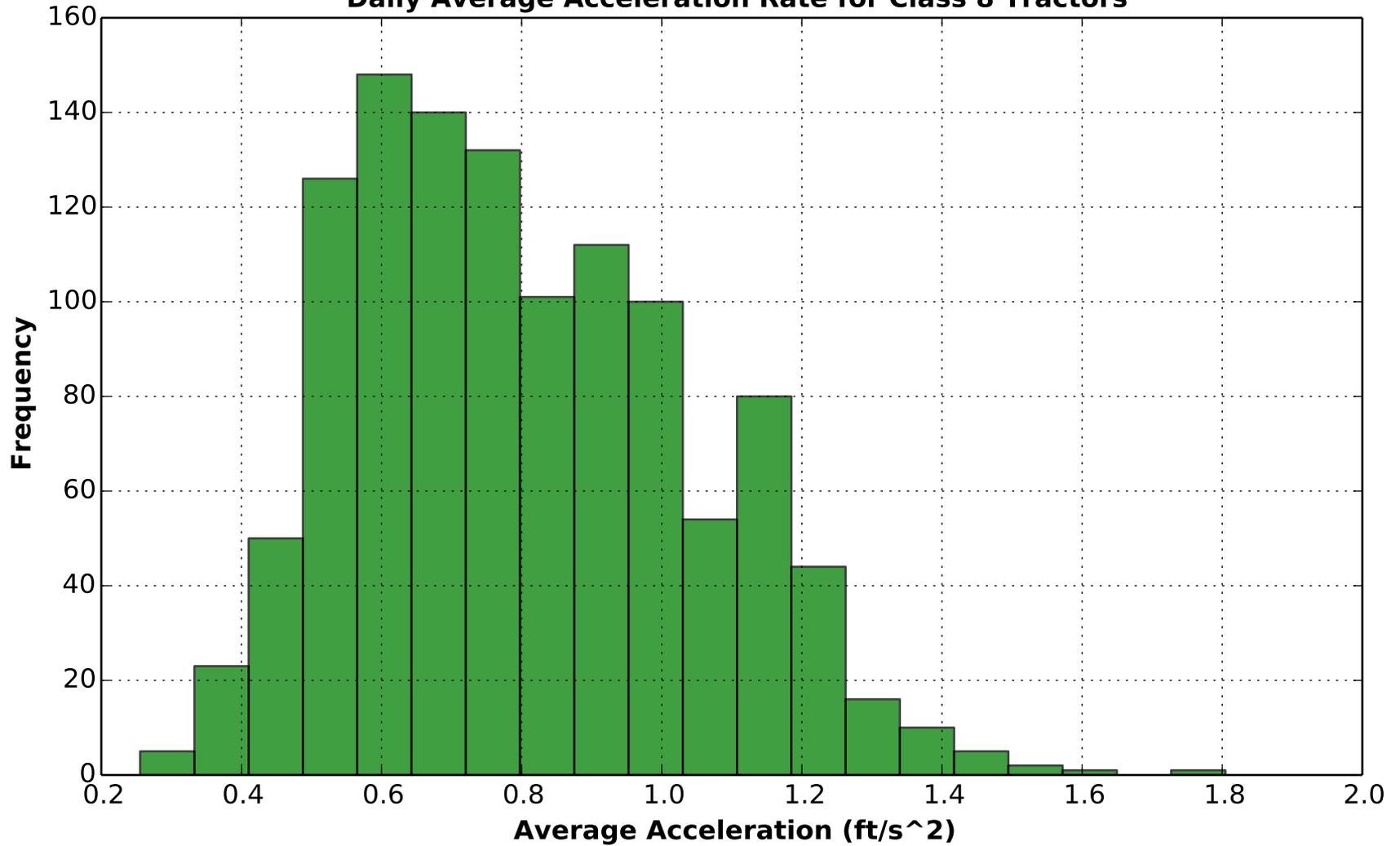


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Average Acceleration Rate for Class 8 Tractors

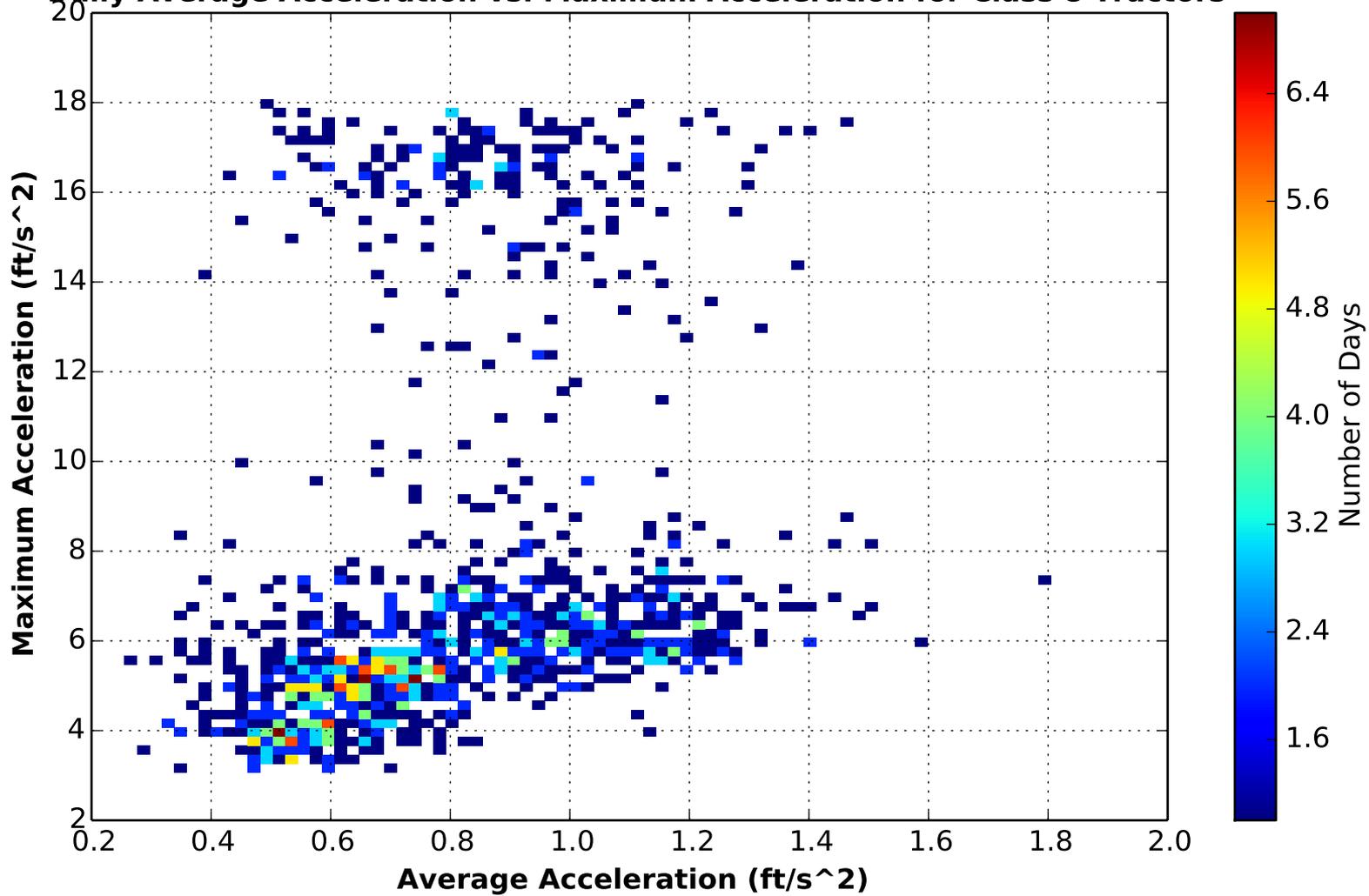


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Average Acceleration vs. Maximum Acceleration for Class 8 Tractors

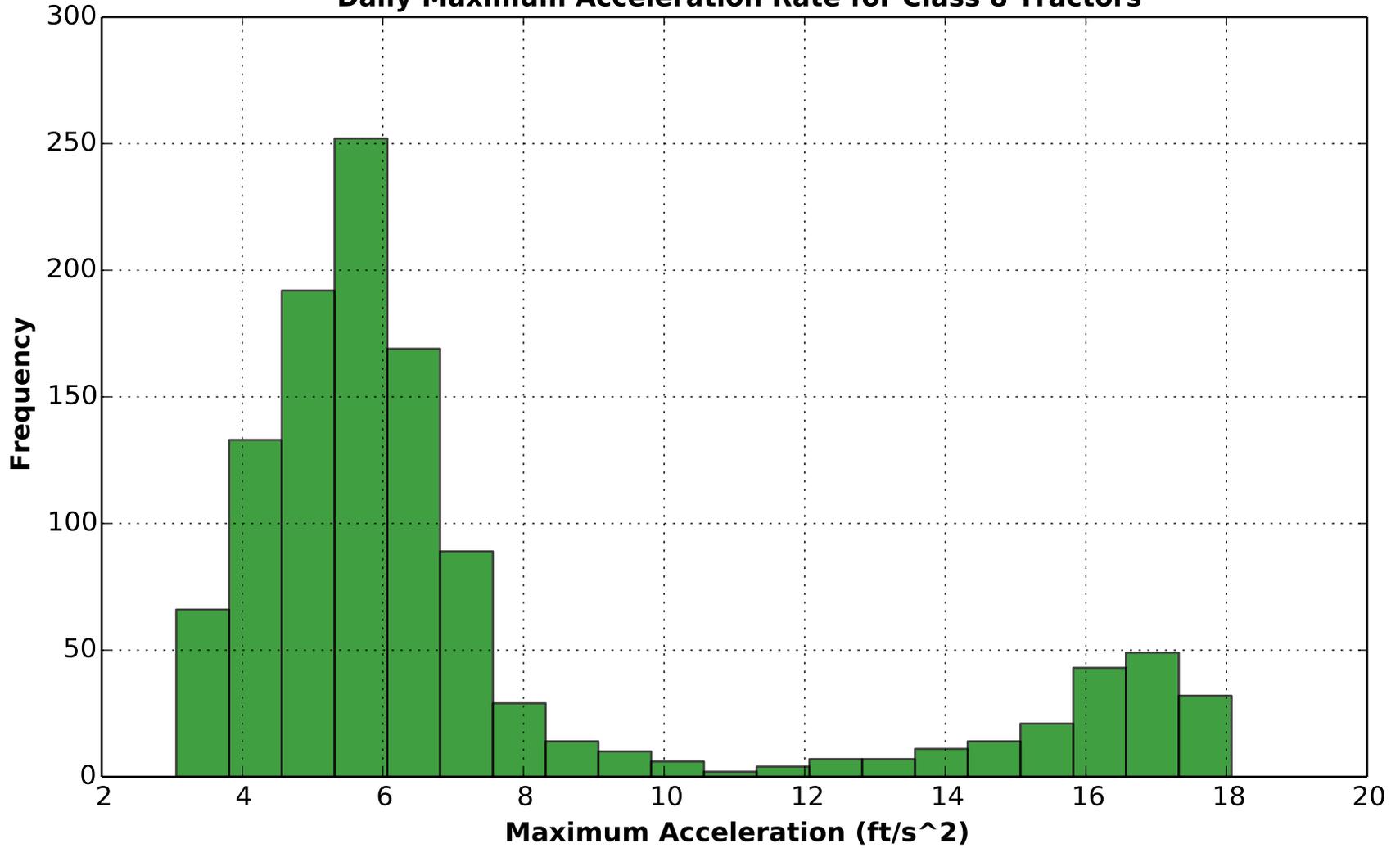


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Maximum Acceleration Rate for Class 8 Tractors

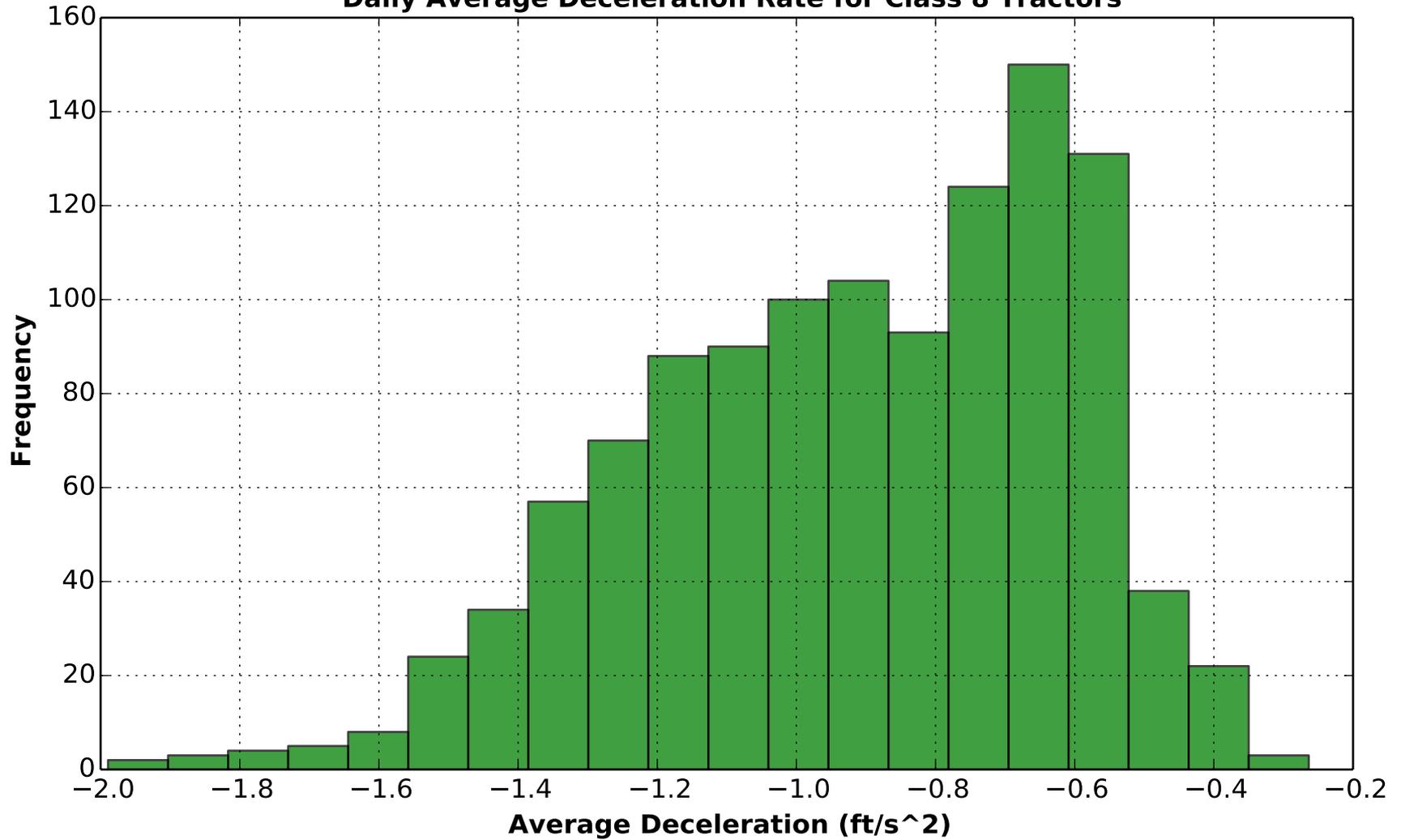


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Average Deceleration Rate for Class 8 Tractors

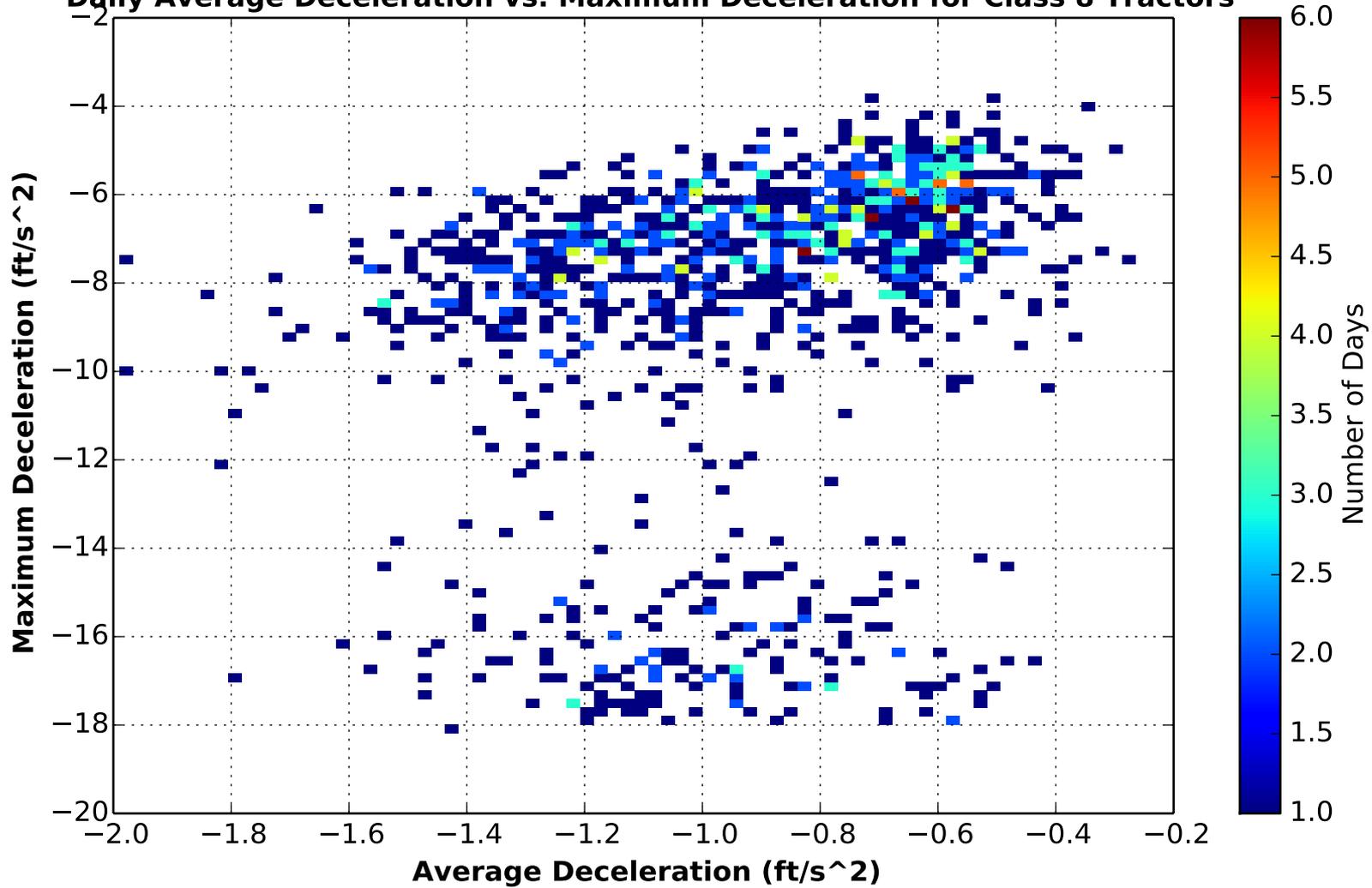


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Average Deceleration vs. Maximum Deceleration for Class 8 Tractors

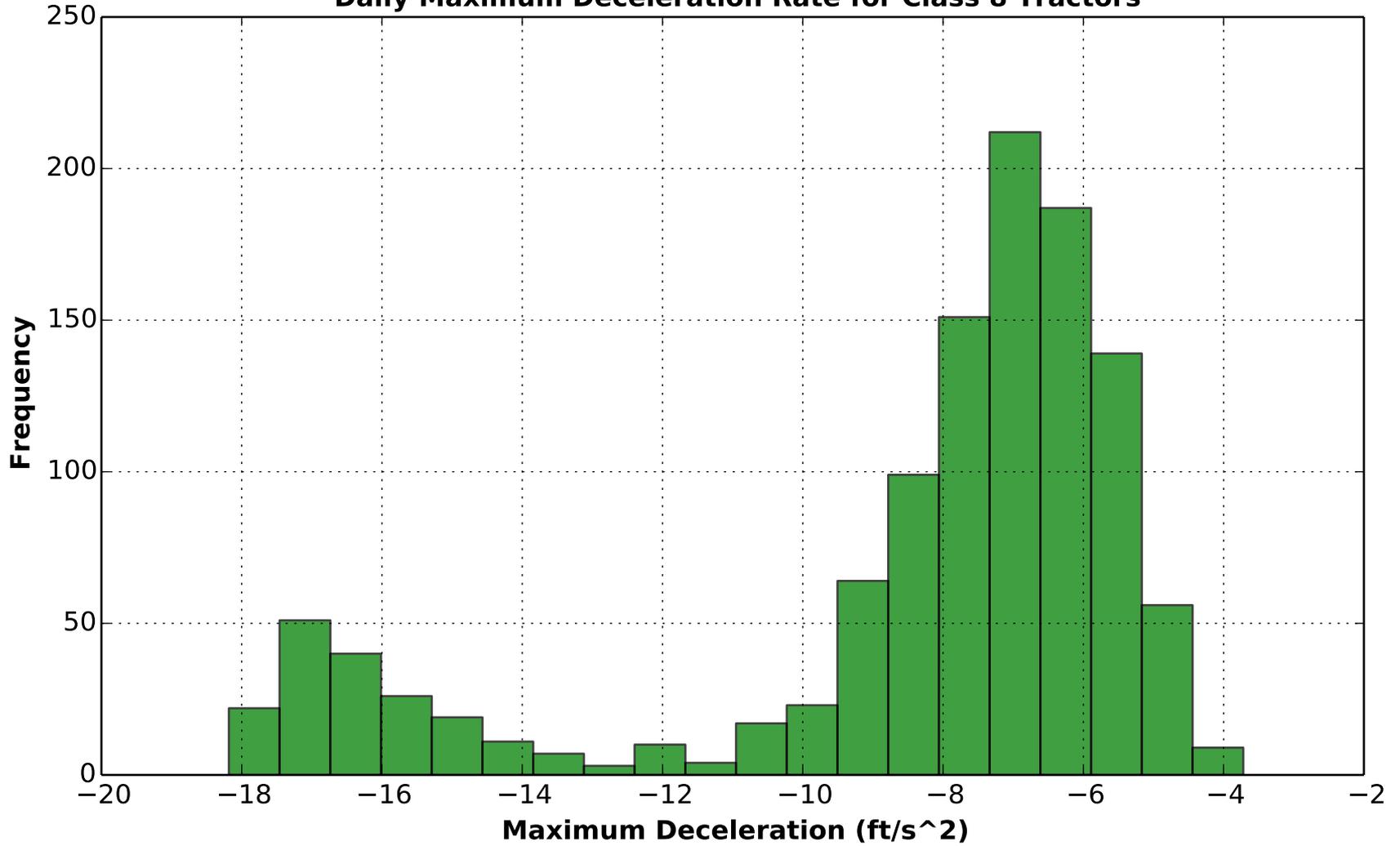


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

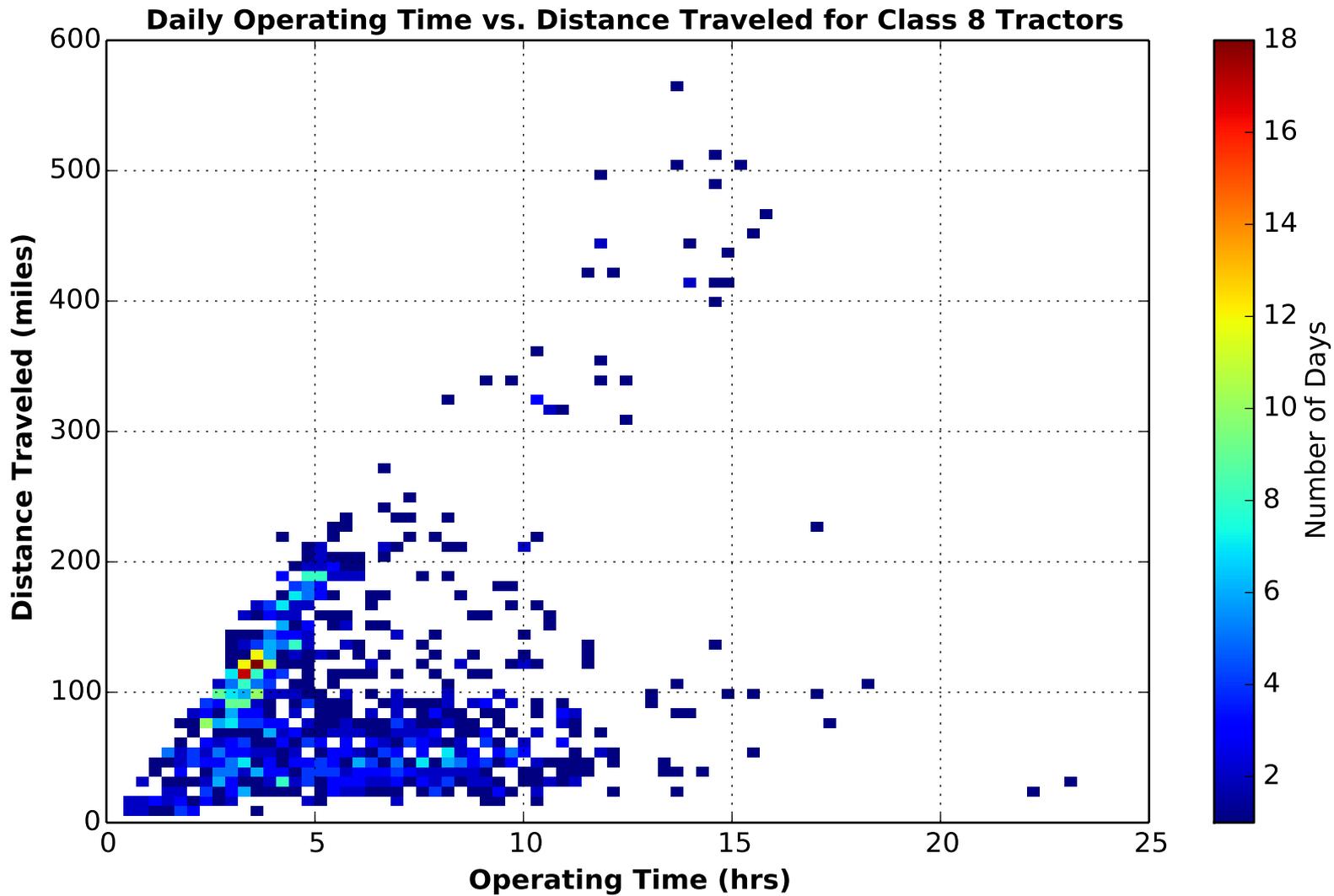
Daily Maximum Deceleration Rate for Class 8 Tractors



of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

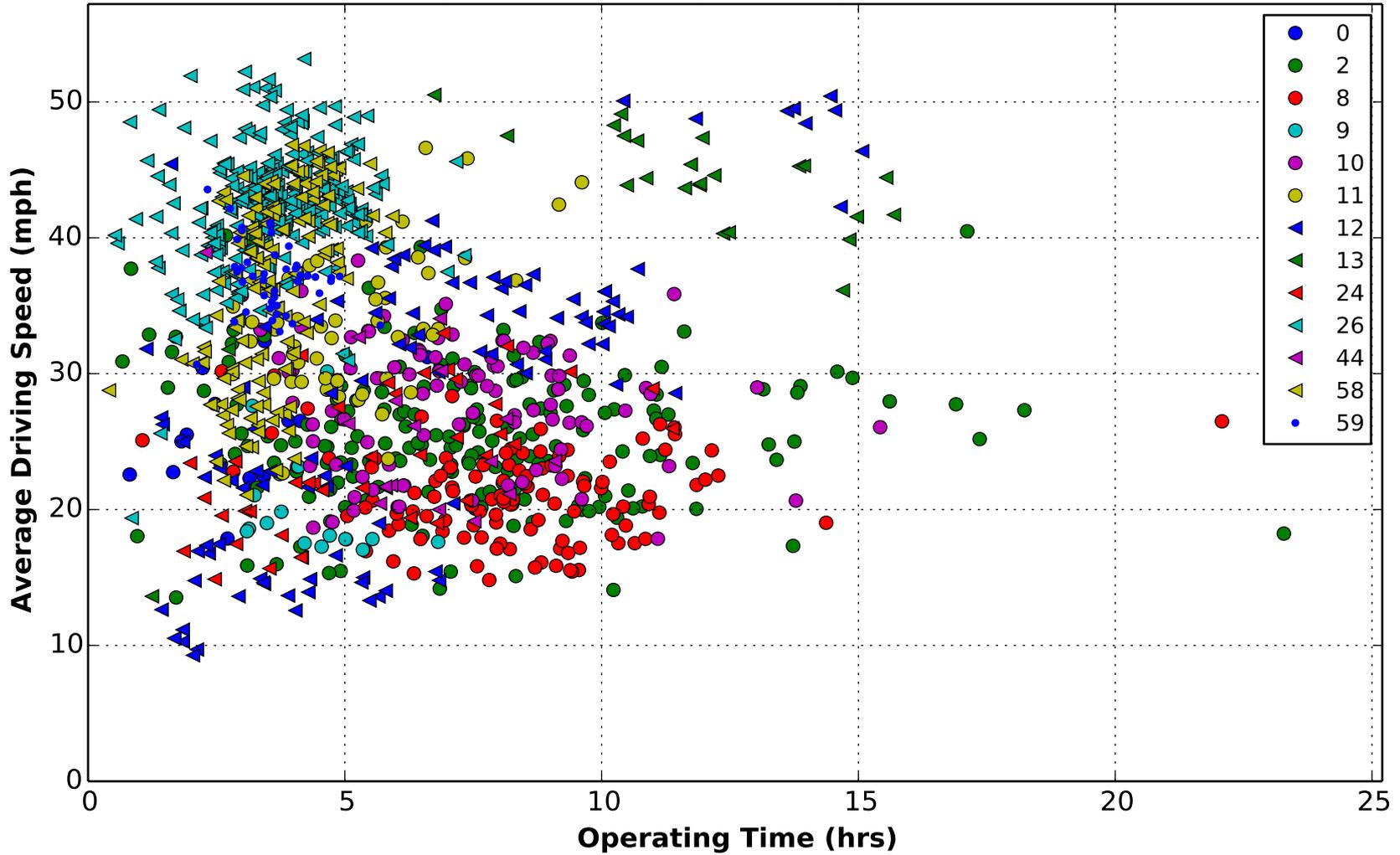


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Daily Operating Time vs. Average Driving Speed for Class 8 Tractors

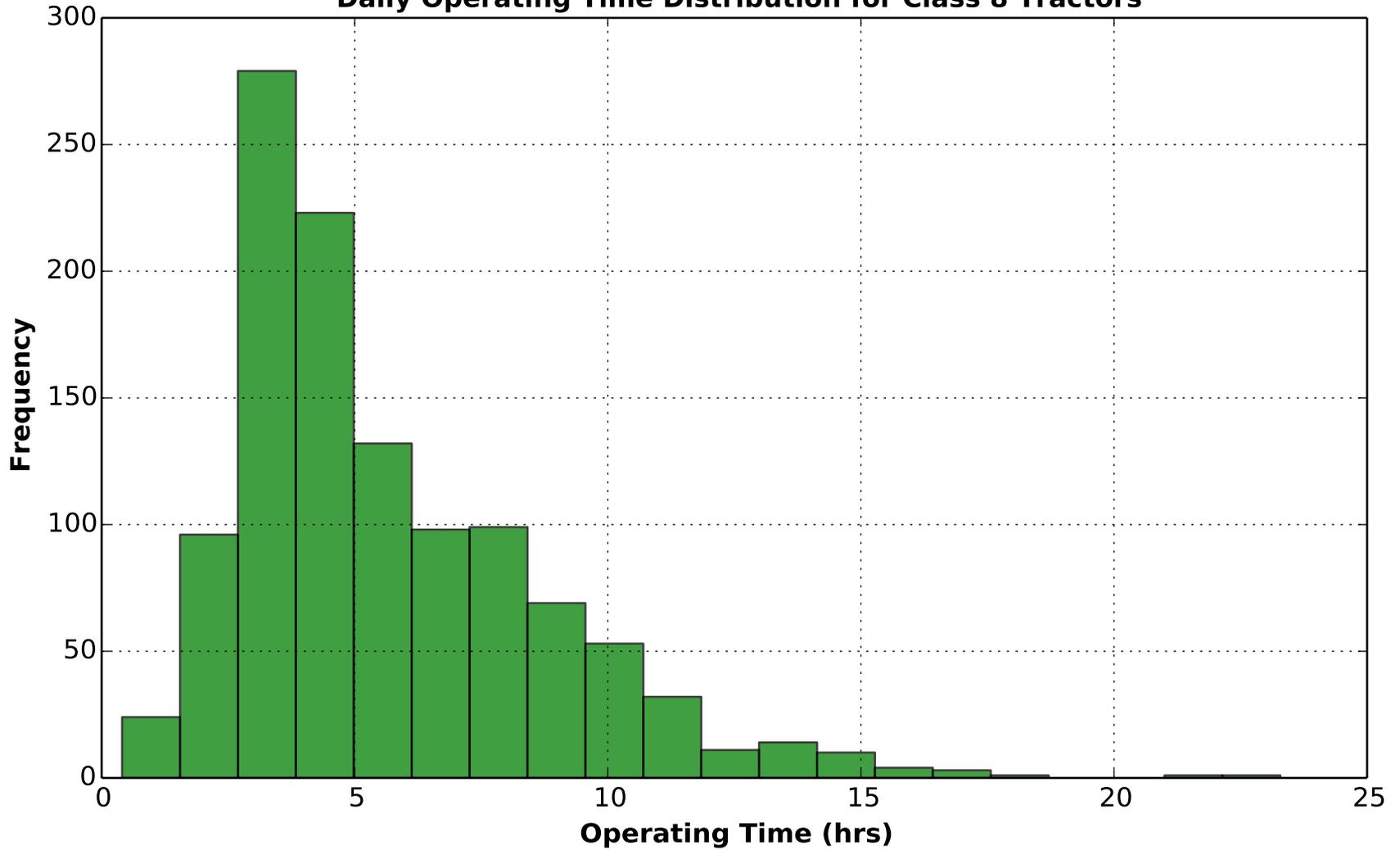


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1149

Daily Operating Time Distribution for Class 8 Tractors

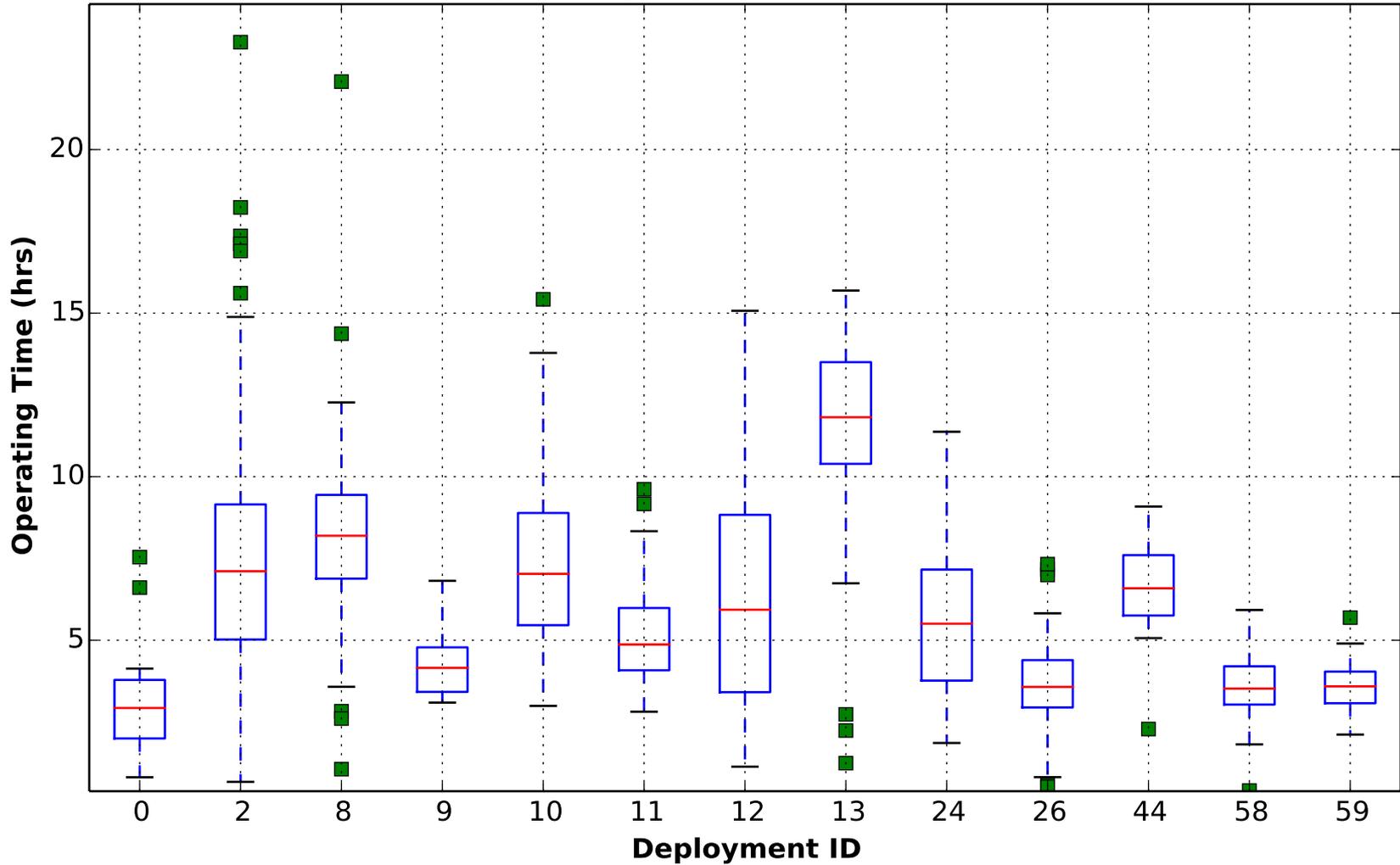


of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Operating Time by Deployment for Class 8 Tractors



of Vehicles Reporting: 70

Generated: Thu Aug 07, 2014

of Days Included: 1150

Interested in Participating?

The statistical summaries presented in this report were generated with the support of a variety of organizations. It is through the continued support of these partner organizations that Fleet DNA continues to grow.

For more information about the project or to discuss partnership opportunities including contribution of data to the database, please contact:

Adam Duran

303.275.4586

Adam.Duran@nrel.gov

www.nrel.gov/fleetdna